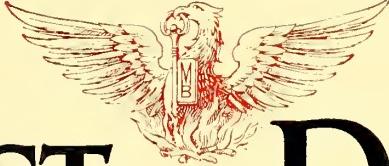


The



CHEMIST AND DRUGGIST

For Retailer, Wholesaler and Manufacturer

FEBRUARY 13 1954



Poly-Tainers *Custom Styled* from 1 oz. to 1 Gallon

Complete manufacture all under one roof.



Produced from virgin polythene — these unbreakable light-weight and airtight containers are manufactured in one piece with no seams to leak.

Many famous brands of toiletries — cosmetics — domestic and agricultural commodities use Poly-Tainers as standard packs.

Special pourers, sprayers, puffers, cream jars and also a wide variety of bottles and jars available from the largest range of stock moulds in the world.

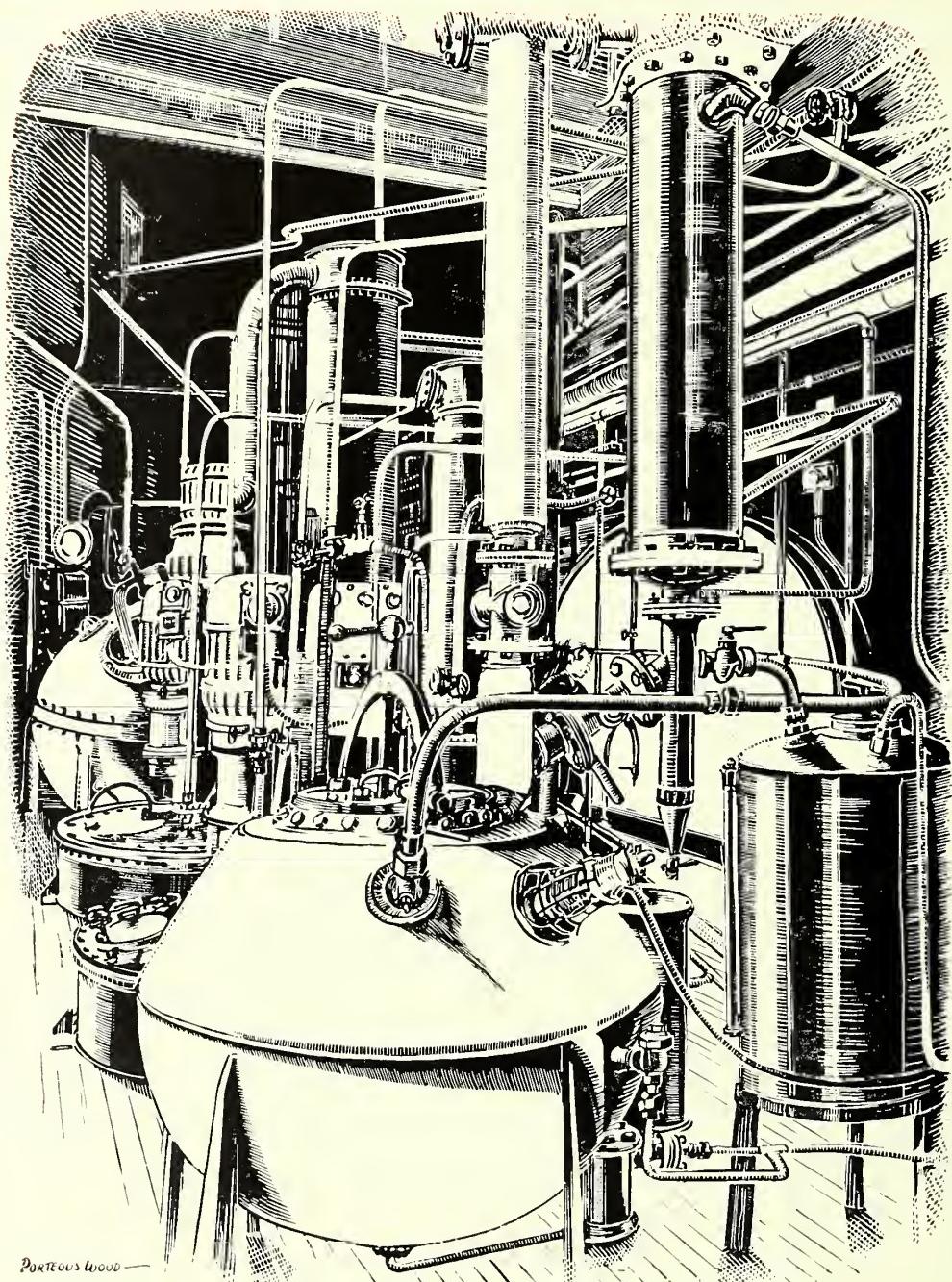
Our service of Consultation in Design, Drawing and Printing is available to assist you with any container problems.

Distributed by

INDUSTRIAL APPLIANCES LTD

21/22b GROSVENOR STREET · LONDON · W.I Tel: GROsvenor 5249-5680 (P.B.X.)

Manufactured by E. Shipton & Co. Ltd., Ferndown Works, Northwood Hills, Middx. Tel: Pinner 11035 (P.B.X.)



'ALKYLATION'

*At Blandfield Chemical Works**No. 5 of a series by J. Porteous Wood, R.S.W.*

ATROPINE
CODEINE
EPHEDRINE
HYOSCINE
MORPHINE
SANTONIN

T. & H. SMITH LTD.

ESTABLISHED 1827

*Alkaloids · Fine Chemicals
Pharmaceutical Preparations*

EDINBURGH SCOTLAND

EMULSIONS
EXTRACTS
INJECTIONS
LIQUORS
OINTMENTS
TINCTURES

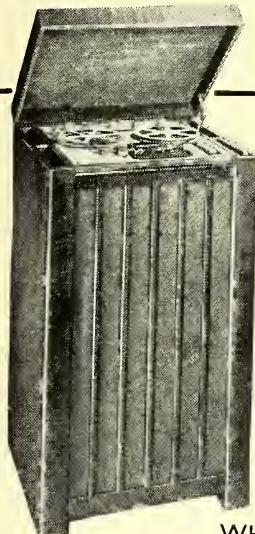
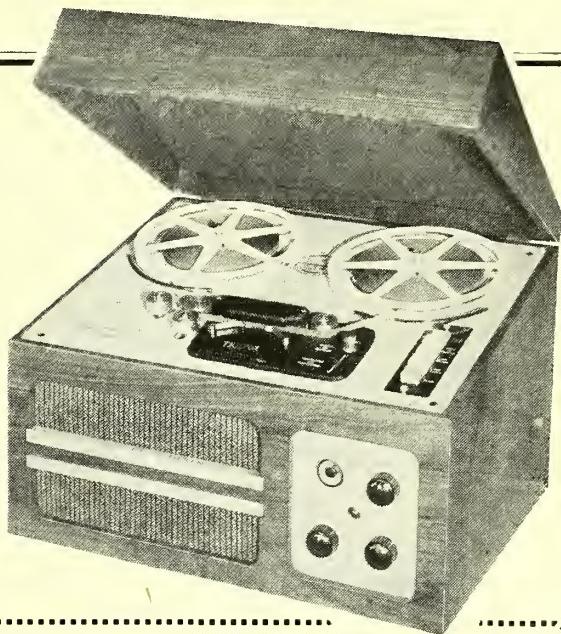
HIGH-FIDELITY TAPE RECORDING

for Cine, Speech or Music

The
KENTON RECORDER
Mark IV

- ★ TRUVOX TAPE DECK
- ★ PUSH-BUTTON CONTROL
- ★ 1 - HOUR MUSIC
- ★ 2 - HOURS SPEECH

60 gns.



EXTRAS

ACOS 33/I Crystal Microphone with screened lead and jack. £2 : 15 : 0.

Radio Pick-up lead with jack. 5/-.

Scotch Boy Tape MC2 III. 35/- per reel.

CONSOLE MODEL

The High-gain amplifier in this circuit driving a 10 in. P.M. speaker gives increased volume with the same high quality reproduction as the Mark IV. All facilities for microphone and P/U recording are as in Mark IV as well as extension speaker socket.

Leaflets on request.

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JONATHAN FALLOWFIELD LTD.

74 NEWMAN ST., LONDON W.I. MUSEUM 7401-2-3

Aspirin tolerance

Difficulties attending the administration of aspirin in large doses over prolonged periods are now largely overcome.

Heavy aspirin dosage is possible without the development of gastric and systemic disturbances when the analgesic is given in the form of Solprin tablets, which provide calcium aspirin unassociated with decomposition products in palatable solution.

Both aspirin and calcium aspirin, as generally prepared, have chemical and physical disadvantages. Aspirin is acid and sparingly soluble: calcium aspirin is unstable and unpalatable.

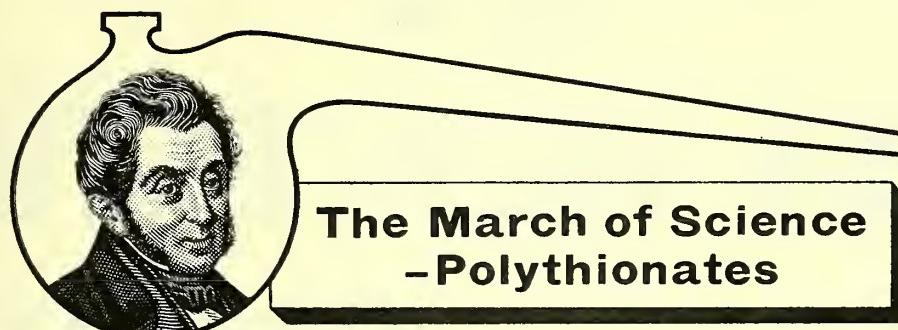
'Solprin' overcomes the disadvantages—combining the advantages—of both. 'Solprin' is substantially neutral. It does not decompose during manufacture or storage. Like aspirin it is analgesic, sedative, antipyretic and anti-rheumatic: like pure calcium aspirin it is soluble and bland.

In all but cases of extreme hypersensitivity, extensive clinical trials with 'Solprin' show just such gratifying results as might be expected of so remarkable a combination of properties. Upon the importance of such results there is no need to insist.

S O L P R I N REGD.

Stable, soluble, palatable calcium aspirin

Solprin is not advertised to the public and is available only on prescription (U.K. and Northern Ireland only). Dispensing pack, price 7/6 (Purchase Tax Free) contains 300 tablets in foil.



*Heinrich Wilhelm Ferdinand Wackenroder
1798-1854*

The chemistry of polythionates, intimately connected with that of colloidal sulphur, goes back to the beginning of the nineteenth century when J. Dalton, the Manchester philosopher, investigated the reaction of hydrogen sulphide and sulphur dioxide in aqueous solution.

A considerable advance was made by Heinrich Wilhelm Ferdinand Wackenroder, a professor of pharmacy in the University of Jena at a time when inorganic chemistry was little more than the hand-maid of medicine and the arts.

In 1846 he first showed how to produce a solution containing what we now know as polythionic acids, but free from colloidal sulphur. Since that time "Wackenroder's solution" has fascinated and bewildered succeeding generations of chemists by the complexity and variability of its composition—but also by its instability.

The necessity for the therapeutic evaluation of the polythionates followed the discovery that bactericidal and fungicidal effects, formerly attributed to elemental sulphur, were, in fact, a property of the polythionates; but stability in solution has, until now, proved the stumbling-block for research workers.

The difficulty has at last been overcome and now, for the first time in this country, we present, in "Dermasulf" a completely stable polythionate of known composition.

Medically and cosmetically entirely acceptable, Dermasulf is composed of complex polythionic acids; $H_2S_xO_6$ (x is principally 4 or 5) and their salts. It is available as a $3\frac{1}{2}\%$ solution. The polythionate content as tetra- and penta-thionate, of the $3\frac{1}{2}\%$ solution is equivalent to $1\frac{1}{2}\%$ elemental sulphur. The pH is approximately 3.4.

Dermasulf is available in 2 oz. bottles. Full literature will gladly be sent on request.



DERMASULF

A completely acceptable, stable solution of polythionates for the treatment of all dermatological conditions where sulphur is known to be of value.

PATA

How to MAKE 15½% EXTRA on sanitary towel PROFITS without selling any more towels

- ✓ As you probably know, your 3rd largest selling line is sanitary towels.
- ✓ And as you know sales of sanitary towels are regular all day, all the year round—you can be SURE the demand is there at a level rate.
- ✓ Yet, by ordering smaller quantities of sanitary towels than you actually need, you are limiting your profit to the usual trade terms.
- ✓ Now, you know from experience, you can sell at least 4 packets, and possibly 8 or more packets, of sanitary towels a day.
- ✓ Then here is how you can make EXTRA PROFIT without any extra sales or extra trouble.
- ✓ Order 4 cartons of Modess now and get special terms that add 15½% to your profits. 4 cartons means selling less than 4 packets a day between calls of the Modess representative.
- ✓ Or, if you prefer, you can order 2 cartons of Modess now and add 11½% to your profits.
- ✓ Both these extra profit offers are conditional upon your displaying the attractive Modess point-of-sale material, specially designed to help you sell more.
- ✓ Both these offers apply for a limited duration only, so order now.

**HERE IS WHAT YOU GAIN
BY ORDERING NOW**

On 4 carton orders :

An extra 5% discount. Your profit will be £5.7.10 i.e. 15½% more than the normal profit of £4.13.4.

On 2 carton orders :

An extra 3¾% discount. Your profit will be £2.12.1 i.e. 11½% more than the normal profit of £2.6.8.

Ask your Modess representative when next she calls or write to :—

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From the Carnegie Range of Fine Chemicals

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Telegrams : 'CARNEGIES, WELWYN GARDEN CITY'

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(6 lines)

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LOOK!**COMBINED
ULTRA-VIOLET AND
LUMINOUS HEAT LAMP****13 GNS!
RETAIL****LOOK!**

This sensational Health Lamp is designed and built to sell on sight, to sell fast. Customers certainly get their 'money's worth' with the 365—and healthy business for you, the stockist. The 365 features a high pressure quartz tube, 650w. luminous heat generators and operates on AC or DC 200/250 volts.

PROFIT BY STOCKING AND SELLING . . .

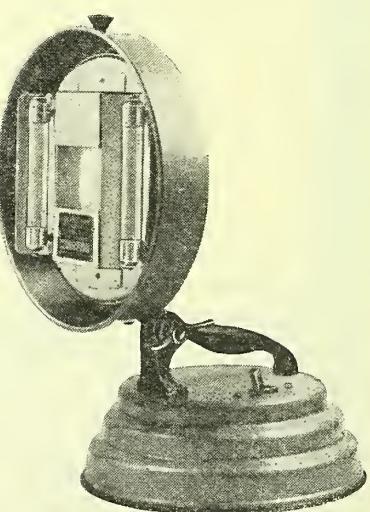
The

Barber

MODEL

365

STOCKED BY LEADING WHOLESALERS
Send for details and list of approved Wholesale Stockists.

BARBER ELECTRICAL SERVICES LTD., LEACH STREET, BIRMINGHAM, 15.

Stimulate your
GLYDEXIL
sales with these counter aids



Manufactured in the laboratories of:

C. L. BENCARD LTD. PARK ROYAL · LONDON · N.W.10
 TELEPHONE: ELGAR 6681 · TELEGRAMS: BENCARLOND · HARLES · LONDON

SHOWCARDS

The eye appeal of the young patient in the picture will remind customers that Glydexil is that little extra treat to take home with the patient's medicine—a double treat that will brighten the sick-room and speed recovery.

LEAFLETS

Placed on the counter these leaflets will tell your customers the advantages of Glydexil—will support your own sales story and arouse the interest of customers waiting for prescriptions.

EVERY PRESCRIPTION IS AN OPENING FOR A **GLYDEXIL** SALE

Ask for a Glydexil showcard and a supply of leaflets S.583 (in units of 100) on your next order, or write to C. L. Bencard Ltd., Park Royal, London, N.W.10.

Glydexil is a pleasant, lightly carbonated beverage containing the nourishing amino-acid glycine and energy-giving glucose. It is widely used in hospitals to aid recovery during convalescence and stimulate sick appetites. Glydexil can be confidently recommended where nutrition is defective or protein reserves are depleted.

Clinical reports are available on request.

GLYDEXIL

is sold only through chemists.

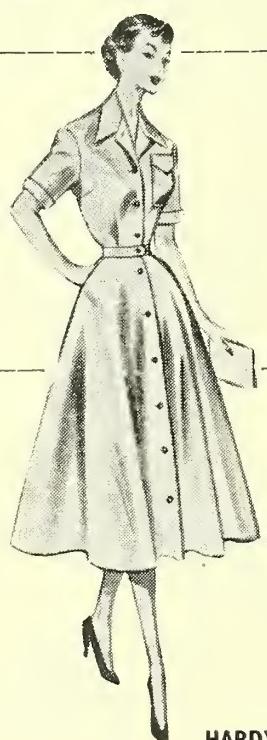




Arthur H. & Co. Ltd.

Smart and Practical!

NYLON OVERALLS



Save the heavy expense and tiresome delays of laundries by changing to nylon overalls for work.

They look smarter, wash, dry and iron quicker, wear better . . . and you need fewer! From every point of view they're ideal for all-day wear.

LADIES' S.B. OVERALL: Tailored with cross-cut flared skirt, inset skirt pocket and patch breast pocket. Adaptable neck, detachable buttons. In White, Saxe, Turquoise, Leaf Green, Navy and Brown. SW, W, WX: 69/II. OS: 74/II (all sizes with long sleeves, 5/- extra).

Also CROSSOVER STYLE: Completely reversible, with generous front wrap, three patch pockets and tie belt. (Colours and prices as for Ladies' S.B. Overalls detailed above).

Order C.O.D. or send crossed P.O./Cheque giving size and colour required. Postage and Packing 1/9 extra on each Overall.

MENS' NYLON OVERALLS: Suitable for all trades and professions a'so available. Send 2½d. stamp for full details.

TRADE
ENQUIRIES
INVITED

HARDY & WEBSTER, Dept. C.D. 13., Factory No. 1, Dewsbury Rd., Leeds.



**Order through
WHOLESAVERS ONLY**

**POTTER'S
CATARRH PASTILLES AND
CRYSTALLISED CATARRH PASTILLES**

**POTTER'S ASTHMA REMEDY
SMOKING MIXTURE AND
CIGARETTES**

**THOMPSON'S
SLIPPERY ELM FOOD**

**ANTEXEMA LIQUID
AND ANTEXEMA GRANULES**

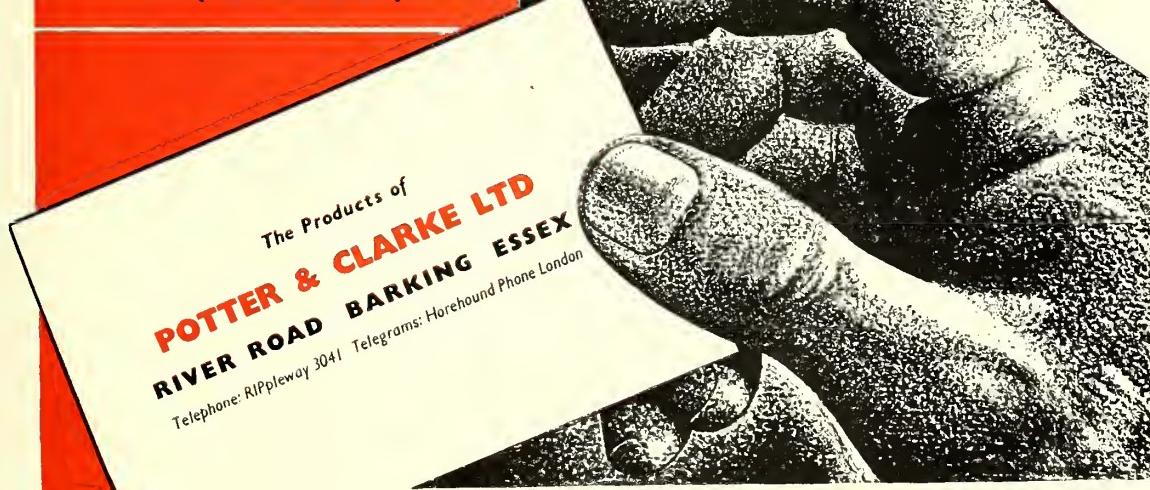
**THOMPSON'S
DANDELION COFFEE AND
COFFEE ESSENCE**

**HADDIT INSECTICIDE
—POWDER AND SPRAY**

**CHAMELEON OILS for HUMAN use
AND CHAMELEON OIL
(VETERINARY)**

**So
well
known
and so—**

**well
sold!**





*spots
before
his eyes*

The sufferer from acne is usually very self-conscious of his appearance, so that even mild acne appears to him a serious and repelling disfigurement.

He wants something that will give him not just a distant prospect of relief, but an immediate improvement in his appearance.

'Eskamel' *for acne*

Resorcinol (2%) and sulphur (6%) in a stable, grease-free, flesh-tinted base
Issued in specially lined 1-oz. tubes. Retail price 4/- each

'Eskamel' gives him just this. It is delicately flesh-tinted, so that the unsightly spots are hidden immediately it is applied, and it usually brings rapid improvement in a matter of days or weeks.

Stock and recommend 'Eskamel'.

Your customers will be grateful and you will be putting ready money in your till.

MENLEY & JAMES, LIMITED, COLDHARBOUR LANE, LONDON, S.E.5
EMTS— for Smith Kline & French International Co., owner of the trade mark 'Eskamel'



Staffallens
Founded 1833

Cold-pressed
ALMOND OIL
AND
APRICOT KERNEL OIL

Expressed at our Wharf Road works without the use of heat, these pure oils are the finest available and have for many years been specialities of the house.



May we send you
Samples

STAFFORD ALLEN & SONS LTD. Wharf Rd. London, N.1 CLErkenwell 1000

TAS/ AL.438

ELASTIC BAND TRUSSES

Eesiness

THE FINEST ELASTIC SURGICAL APPLIANCES

**SURGICAL BELTS
CORSETS
BRASSIERES**

SUSPENSORY BANDAGES

ELASTIC HOSIERY

- SEAMED - FINE OR STOUT
- SEAMLESS - FINE OR STOUT
- TWO-WAY STRETCH LASTEX TYPE
- ELASTIC NET "EESINET" IN COTTON OR NYLON
- • • TWO-WAY STRETCH - LASTEX TYPE

MADE WITH NYLON YARN

NATIONAL HEALTH SERVICE APPLIANCES
of all Descriptions

E. SALLIS LTD.

VERNON WORKS · BASFORD · NOTTINGHAM
PHONE NOTTM. 77841/2

GRAMS "EESINESS"

Dull hair becomes Radiant

Grateful women everywhere are finding Four-in-One the effective answer to hair that is dull, faded or just showing the first grey touches. Easy to use—it can be applied in a few minutes like a shampoo—Four-in-One not only restores full natural colouring in a single application, but conditions the hair to soft, silky loveliness at the same time! Available in twelve glamorous shades ranging from Blue Black to Smoke Blonde.



Attractive descriptive booklets 'Begone Dull Hair' are available for counter distribution.

INECTO
Four-in-One

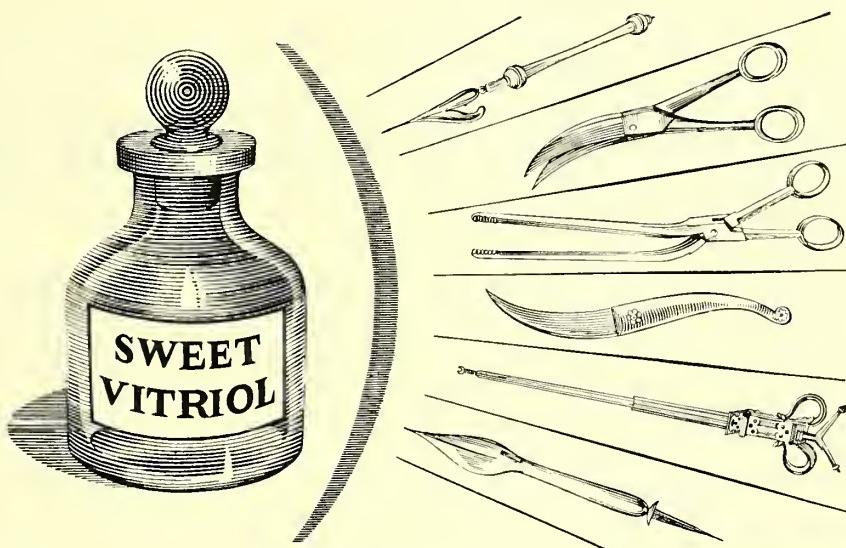
PRICES

Small size (1A & 1B bottle) 2/6 wholesale (plus P.T.), retailing at 5/-.

Large size (4A & 4B bottles) 7/- wholesale (plus P.T.), retailing at 15/9.

If you are not already stocking Inecto, the magic name in hair colouring, write at once for full particulars.

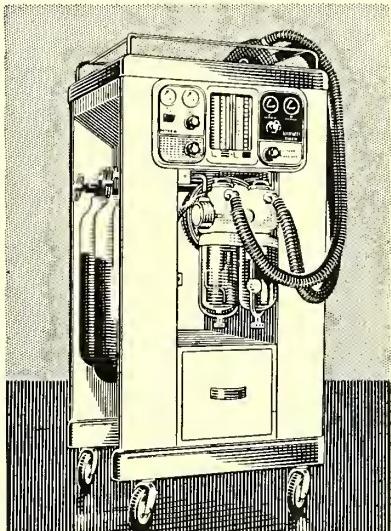
INECTO ENQUIRY BUREAU
27 DOVER STREET, LONDON, W.1
Hyde Park 7541 (12 lines)



Armour against pain..

Three thousand years of seeking added little else but "Sweet Vitriol" and the poppy to man's armoury against pain. Today, medical science has at hand the widest range of apparatus—for anaesthesia in the theatre, analgesia and oxygen therapy in the ward—perfected and made by THE BRITISH OXYGEN COMPANY.

With the apparatus the B.O.C produces the gases, and with the gases, a service which responds promptly to any need.



THE BRITISH OXYGEN CO. LTD

MEDICAL DIVISION



Great West Road
Brentford
Middx.

SERVICE AS UNIVERSAL AS THE NEED

Telling Mrs Jones about Robinson's...

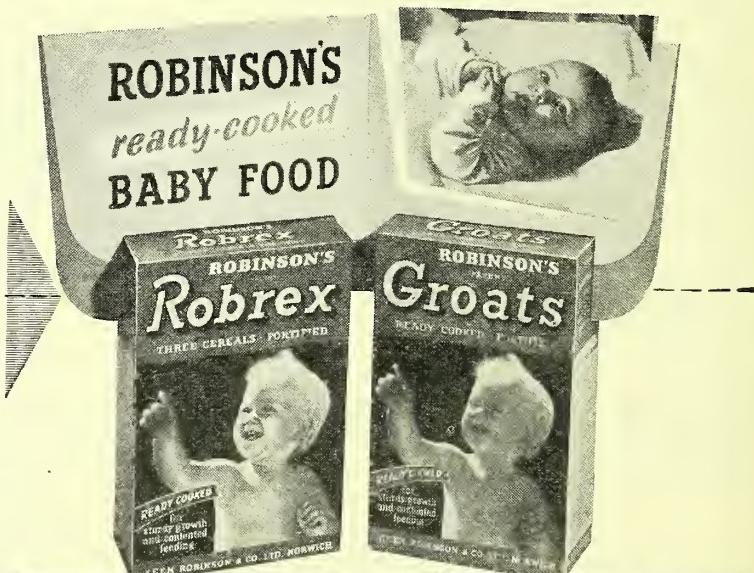
A big new National Advertising campaign in large spaces is telling every mother about Robinson's ready-cooked baby foods. Reminding her that Robinson's long experience is her best guarantee of high quality, and directing her to your shop.

Here are two of the new advertisements—and also details of new displays which will help you get *your* share of increased sales.

Twin - pack crownner

In full colour, makes a striking counter display with packs of Robrex and Ready-cooked Groats. There's also a new display for Robsoup, to hold two tins.

Our representative will be calling shortly, but if you want display material at once, please write to the Advertising Department, Keen, Robinson & Co. Ltd., Carrow Works, Norwich.



Ready-cooked
Robinson's Baby Foods

... in these striking advertisements

Here is a small reproduction of the first of a series of advertisements for Robinson's baby foods, which will be appearing throughout the year in:

	Readership
DAILY MIRROR	10,210,000
HOUSEWIFE	540,000
WOMAN & HOME	1,690,000
MY HOME	660,000
MOTHER & HOME	590,000
WIFE & HOME	940,000
GOOD HOUSEKEEPING	980,000
MOTHER	140,000
PARENTS	78,000
WOMAN'S WORLD	440,000
HOME COMPANION	350,000
HOME CHAT	690,000
HOME NOTES	720,000
WOMAN'S PICTORIAL	470,000
WOMAN'S ILLUSTRATED	1,120,000
WOMAN'S WEEKLY	2,970,000
NURSERY WORLD	90,000
FAMILY DOCTOR	(Circulation) 100,000
TOTAL ESTIMATED READERSHIP	$22\frac{3}{4}$ MILLIONS

Similar advertisements will also appear in the leading nursing papers.

Robsoup

will be featured in quarter pages like the one shown here, in the *Radio Times*.

ESTIMATED READERSHIP 18 MILLIONS

KEEN, ROBINSON & CO. LTD
CARROW WORKS · NORWICH

Take the worry out of weaning!

Who's the busiest person in the house? Mother, of course. But at least the wise mother today doesn't need to worry about preparing food for baby. Robinsons have done the worrying for her—and Ready-cooked Groats is the result.

For many generations, babies have been growing strong and sturdy on Robinson's 'Patent' Groats, because Groats is made from nourishing oats, with the vitamins and minerals baby needs at weaning time.

Ready-cooked Groats gives you the same-time-tested cereal you the same flavour babies love. Simply add warm, sweetened (boiled) milk, and there's baby's meal. No saucepans, no fuss. Just a fine contented baby.

Don't forget Robrex

Add variety to your baby's diet with these other nourishing, ready-cooked weaning foods by Robinsons. Robrex the 3-in-1 cereal (oats, wheat and barley), is recommended by welfare.

...and Robsoup too!

Robinson's Robsoup—baby soup in a safe, handy powder form to supplement cereal and accustom baby to new tastes. Try delicious Chicken or Bone and Vegetable variety.

ROBINSON'S ready-cooked GROATS

KEEN, ROBINSON & CO LTD CARROW WORKS · NORWICH

Who says Chicken for lunch?

Mother does. She says Chicken Robsoup at weaning time. This baby soup in handy powder form mixes instantly with hot or cold (boiled) water. So safe too! Germs can't breed in a dry powder: what's left each time stays absolutely fresh. Make Robsoup baby's first non-cereal food. In delicious Chicken or Bone and Vegetable varieties.

Each 1.6 tin makes 5 to 15 helpings according to baby's age. Obtainable from chemists, or send 2d. for sample of Chicken variety to Dept. DH. 40.

Robsoup

FOR BABY

KEEN, ROBINSON & CO LTD CARROW WORKS · NORWICH

You know where you are —with RENNIES

There is nothing 'new-fangled' about Rennies. They do not seek to achieve a 'fad' acceptance on the strength of a stunt claim. There is no likelihood of Rennies being here today and gone tomorrow. You know where you are with Rennies.

The Rennies formula is in line with responsible medical and pharmaceutical thinking. It has been accepted, from its beginning, by an ever-increasing public. Rennies are an effective product—and a steady, solid seller. It is a fact that

**More people get relief
with RENNIES than
with any other indigestion tablet**

STILL packed in popular sizes . . .

25 tablets, 9½d. 50 tablets, 1/6d. 100 tablets, 2/8d.

AMPOULES

of
INJECTION
SOLUTIONS

Price List on
application

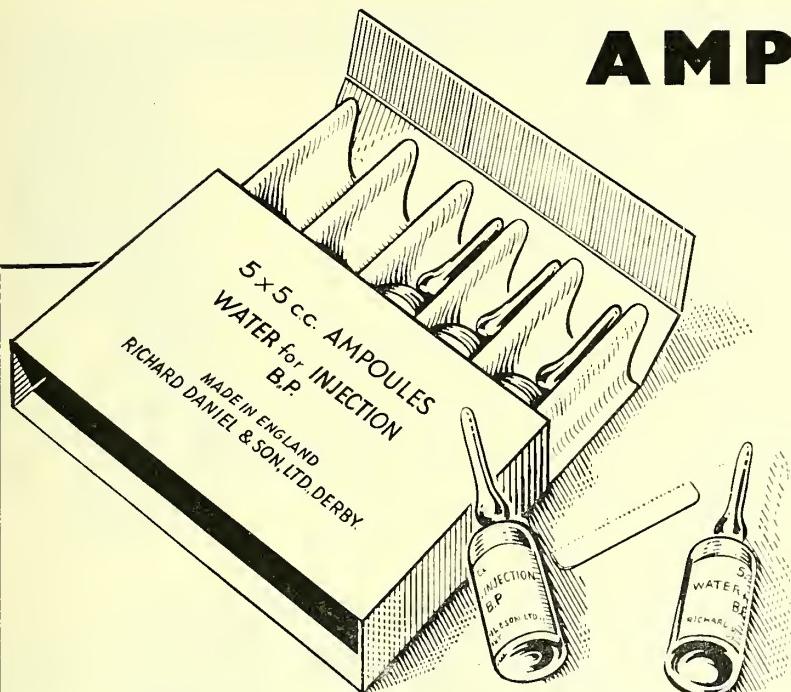
A FULL RANGE
IN ALL SIZES
MANUFACTURED
BY

RICHARD DANIEL & SON LTD

MANSFIELD ROAD, DERBY

TEL: 48266 (4 lines)

Also at ASHTON-UNDER-LYNE



150 Dispensing Sundries Items

and

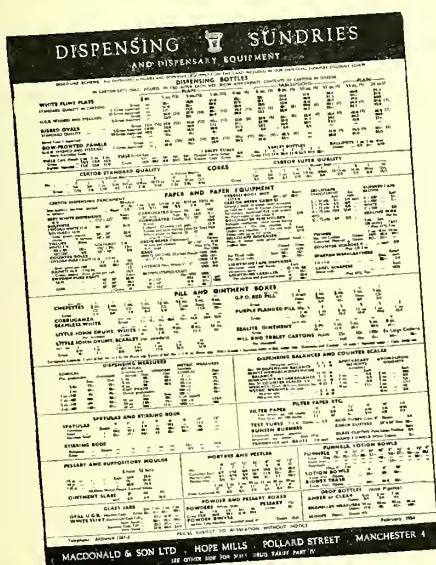
DISCOUNTS

on them all!

Our Dispensing Sundries Card, now being re-issued, gives details of 150 dispensing sundries on which discounts are offered.

Many of these lines you use every day —bottles, boxes, corks, paper of all kinds, etc. That is why many chemists find it so profitable to be in our Dispensing Sundries Discount Scheme.

Enter your name, too. It will pay you.



Useful for hanging in the dispensary.
Size : Approximately 12½" x 9½".



for PHARMACEUTICAL TABLETS OF QUALITY

A Full Range — Bulk or Packed
With Prompt Service

Enquiries are invited for the tabletting of customers' own materials

For Home and Export

APPROVED PRESCRIPTION SERVICES LTD

Manufacturers of Pharmaceutical Products

CLECKHEATON, YORKS

Phone: CLECKHEATON 1704

RATS!!!

so what?

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(makes 20lbs. bait for rats and mice).
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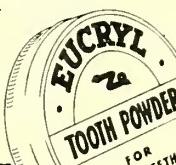
In white, chlorophyll, and in a special grade for dentures, this year it's powder....



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Once I never thought of using anything else. Somehow I never tried powder. Silly of me! Actually powder cleans' teeth better than anything. As my dentist says, it not only cleans them, it polishes them too. You ought to try Eucryl, white or chlorophyll—it's only 1/5d. and that's the large size.

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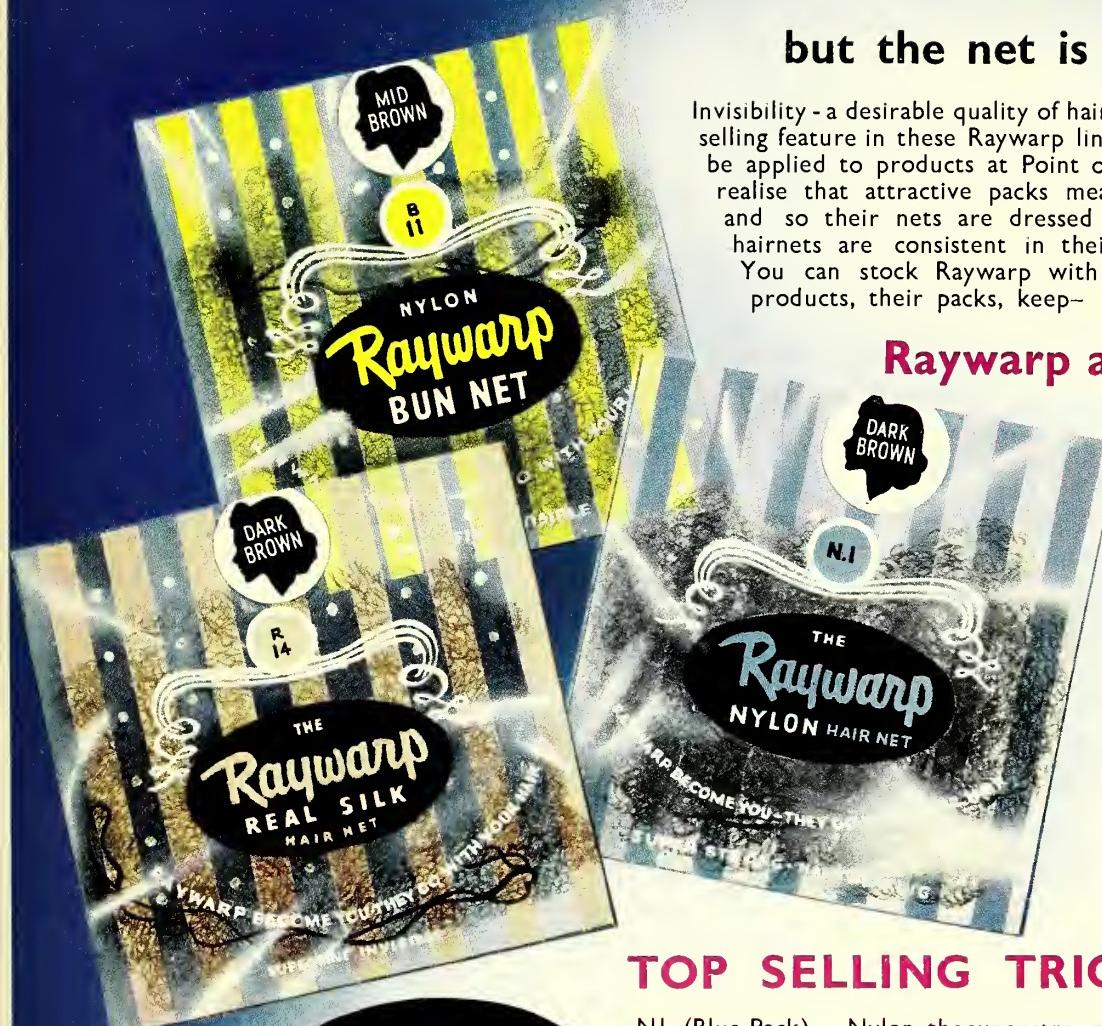


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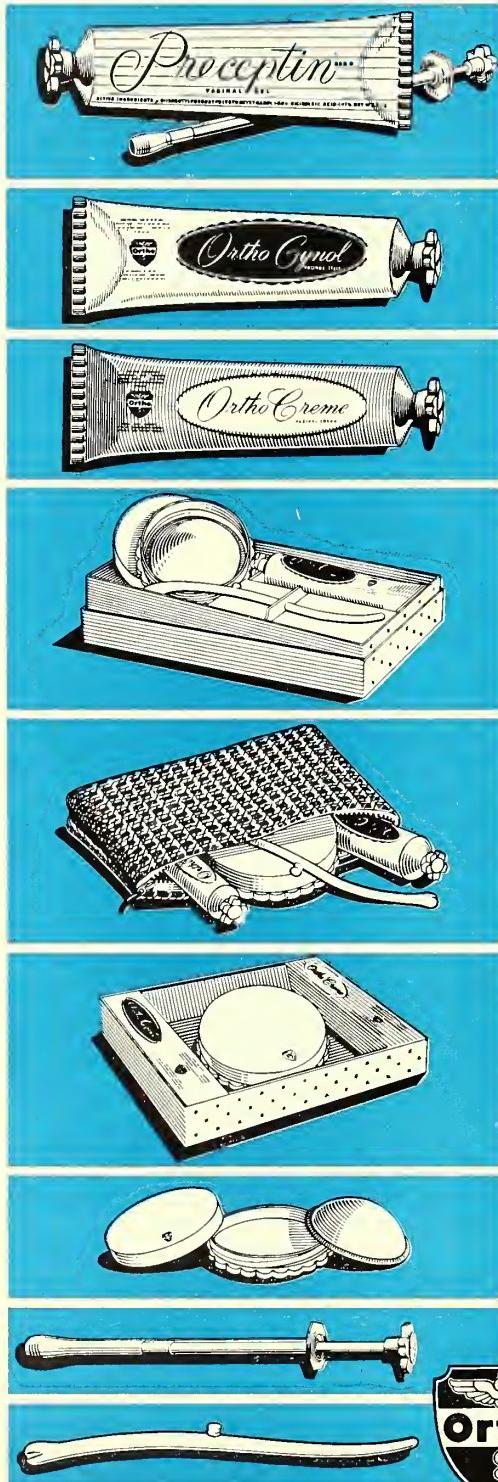


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Package A : 3 oz. tube, with Ortho Applicator.
Package B : 3 oz. tube.

Ortho-Creme: contraceptive cream.

Package A : 2½ oz. tube, with Ortho Applicator.
Package B : 2½ oz. tube.

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3 oz. tube of Ortho-Gynol
Ortho Diaphragm } in sizes 55 to 95
Ortho Diaphragm Introducer } (in 5 mm. gradations).

Ortho-Creme Set: as Ortho-Gynol Set with tube of Ortho-Creme instead of Ortho-Gynol in sizes 55 to 95 (in 5 mm. gradations).

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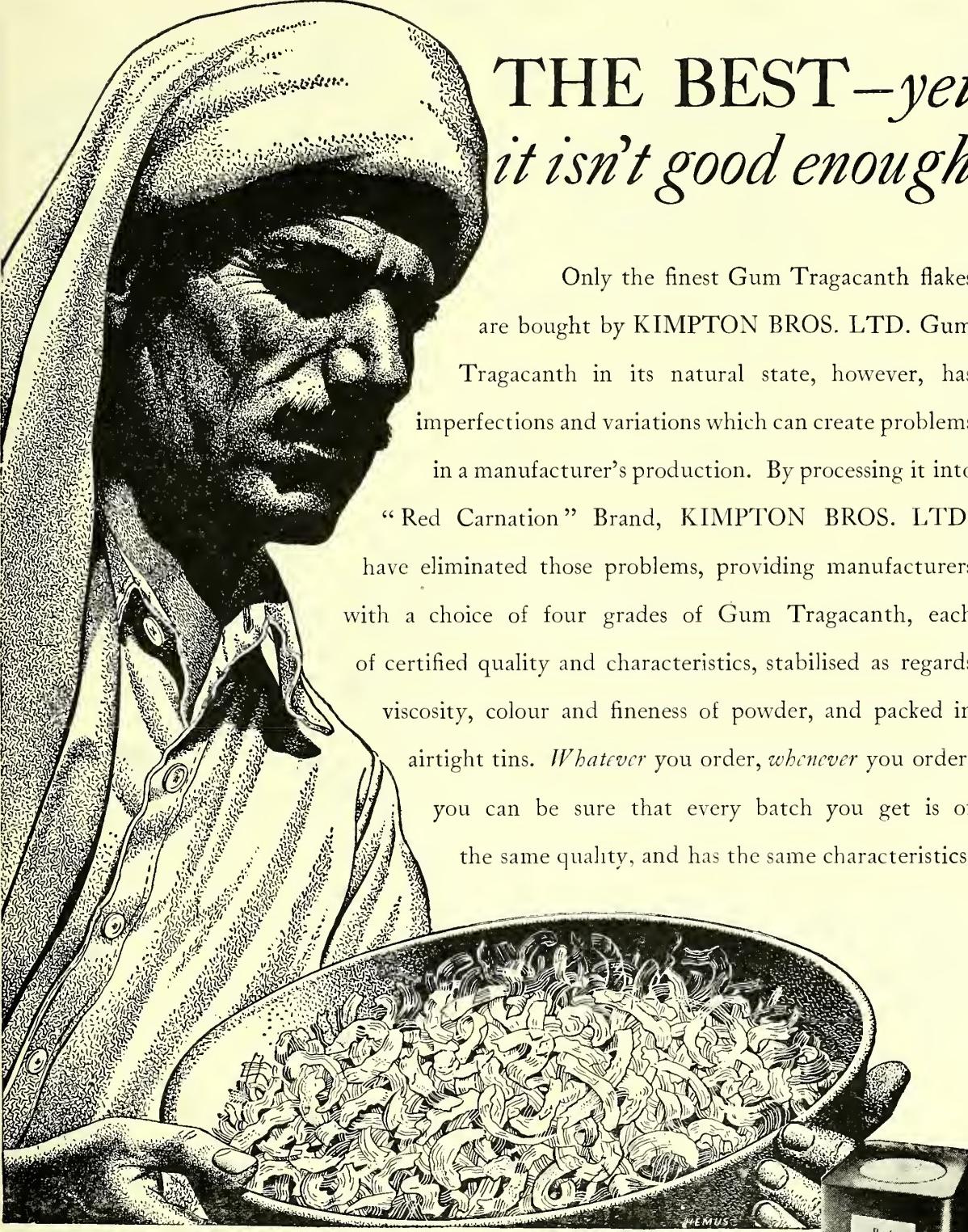
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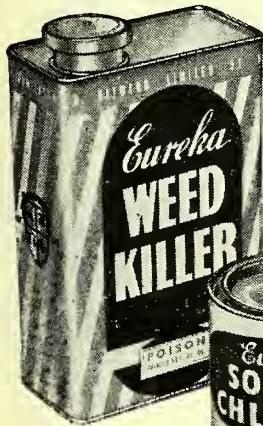
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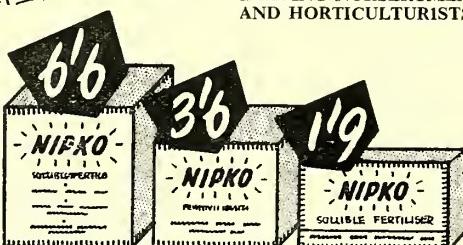
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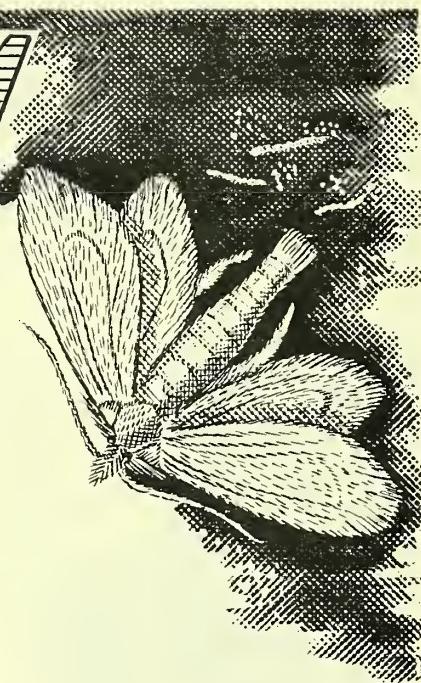
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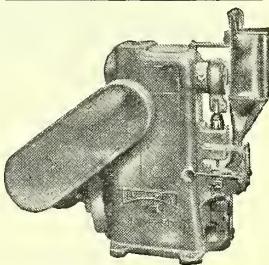
solves your Tablet Making Problems



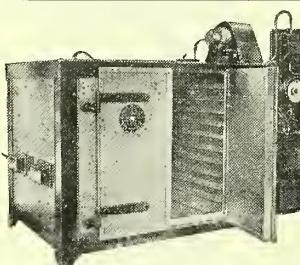
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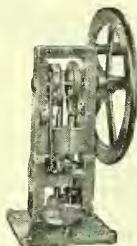
Have you this book? "Tablet Making"—An authoritative volume by A. Little and K. A. Mitchell. 123 pp. 47 illustrations. 31 formulæ. Cloth bound. 15/- net post free.



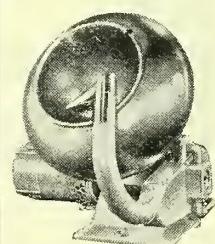
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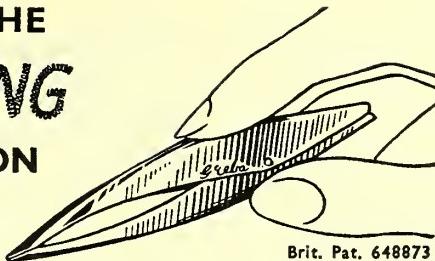
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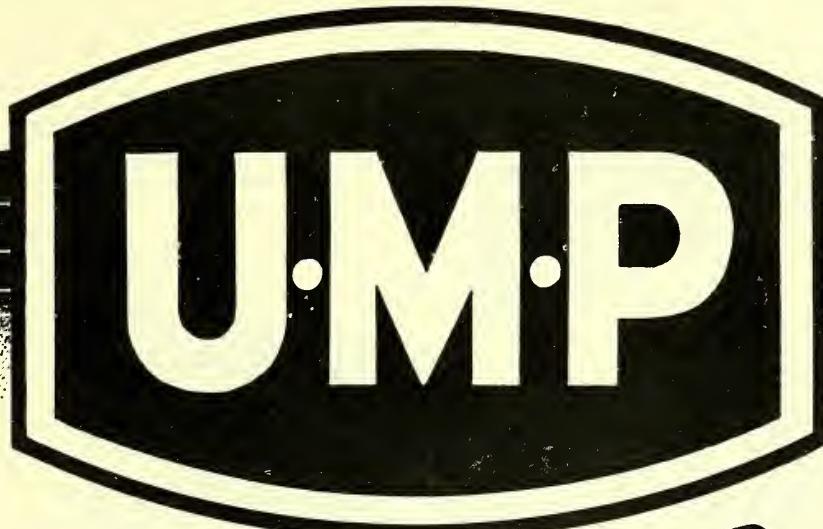
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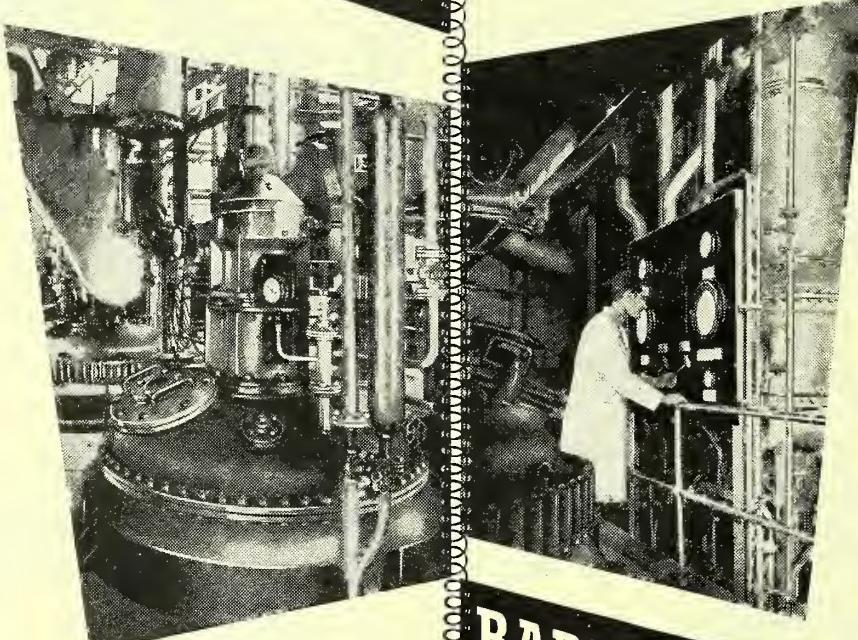
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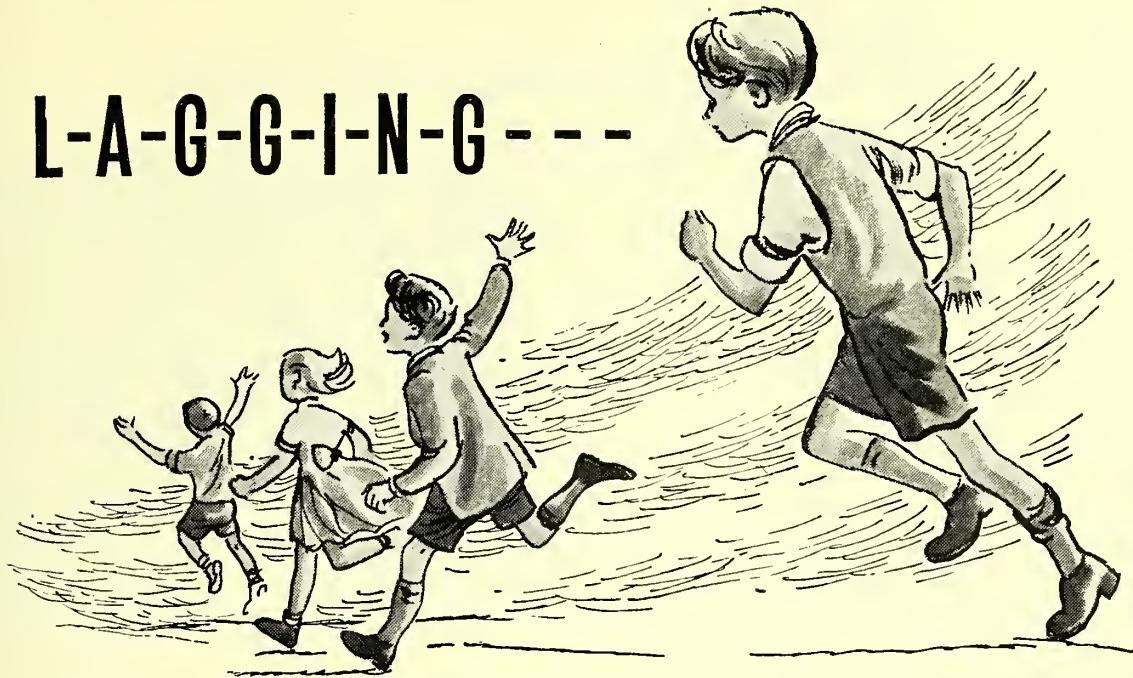
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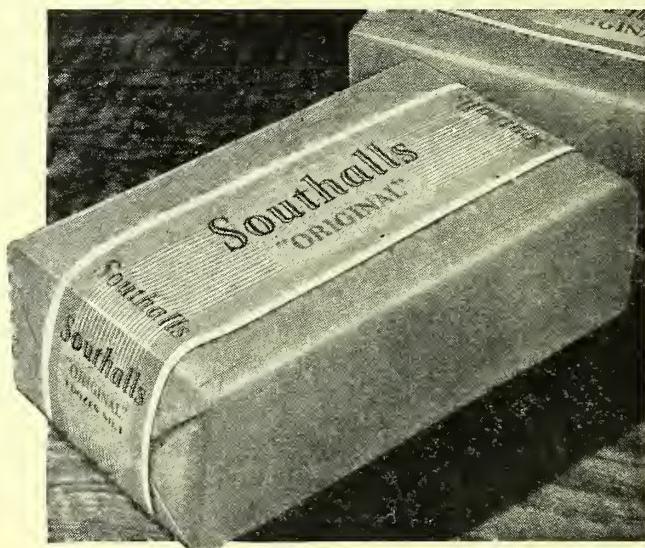
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ESTABLISHED 1859

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*Official organ of the Pharmaceutical Society of Ireland
and the Pharmaceutical Society of Northern Ireland*

Volume 161

February 13, 1954

No. 3860

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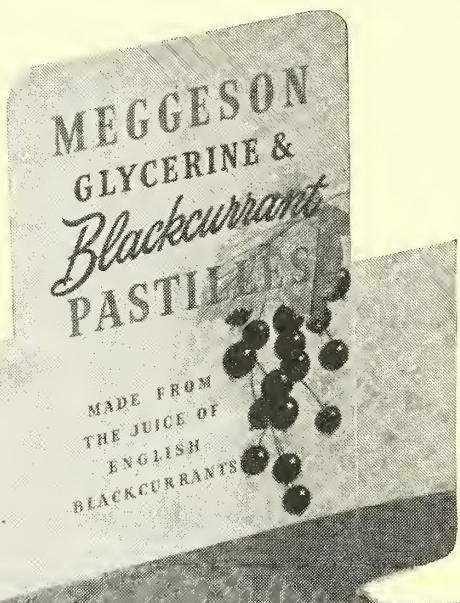
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The CHEMIST AND DRUGGIST

Volume 161

FEBRUARY 13, 1954

No. 3860

One or Two Drug Tariffs?

SCOTTISH CHEMISTS OPPOSE UNIFICATION

THE report of the Comptroller and Auditor General contained in the Civil Appropriation Accounts (Classes I-VIII), 1952-53, published recently, refers to the refusal of Scottish chemists to co-operate in devising a single drug tariff, jointly with the Department of Health for Scotland, the Ministry of Health, and English chemists.

The Comptroller's report states that in compiling the Scottish Drug Tariff, the Department of Health for Scotland makes a number of allowances and rounding up adjustments when translating wholesale rates into rates for the smaller quantities used in individual prescriptions. Those allowances are not made in compiling the English Tariff.

The Comptroller's officers investigated the effect of those differences in practice on the prices in the two Tariffs for a few of the more commonly used ingredients. They found that the Scottish prices were higher by amounts ranging from 14 per cent. for codeine tablets to 500 per cent. for chloroform water. The Comptroller comments that, because it appeared to him that Scottish chemists were getting an oncst greater than the official 25 per cent., he had asked the Department of Health on what ground they made those concessions and whether they had considered the possibility of a common tariff.

The Department replied that the cost of those features of the Drug Tariff was £50,000 a year; they were established features both of the previous National Health Insurance Tariff and of the Health Services Tariff in Scotland. They believed that it might be possible to devise a single tariff sufficiently flexible to meet the differences in practice between England and Scotland, but the Scottish chemists had so far refused to co-operate in attempting to devise such a tariff. Their grounds were that any such step would threaten both the previous arbitration settlement and the practice of conducting negotiations on remuneration separately for Scotland.

The accounts show that in ENGLAND in the year ended March 31, 1953, general medical, dental, pharmaceutical and supplementary ophthalmic services cost £140,414,181 (£9,213,981 more than was granted); in WALES the cost was £9,418,678 (£495,178). In ENGLAND the pharmaceutical services cost £39,632,741 (£6,582,741 more than the grant); in WALES the pharmaceutical services cost £3,254,239 (£654,239).

In SCOTLAND the general medical, dental, pharmaceutical and supple-

mentary ophthalmic services cost £18,113,376 (£43,624 less than granted). The pharmaceutical services cost £5,311,503 (£11,503 more than granted).

Copies of the report may be obtained from H.M. Stationery Office, price 17s. 6d. each.

IMPORTS AND EXPORTS Licensing rules consolidated

THE Board of Trade announces the introduction of a consolidated Notice to Importers (No. 635) bringing up to date the summary of import licensing arrangements. Copies may be obtained from Import Licensing Branch, Board of Trade, 43 Marsham Street, London, S.W.1. The Board also announces the introduction of a consolidated Order (published as S.I., 1954, No. 118) governing export licensing arrangements. No changes are made in the existing regulations for imports and exports by those documents. They set out the existing licensing arrangements in a convenient form.

PURCHASE TAX Exemption for B.Vet.C. drugs

THE Purchase Tax (No. 4) Order, 1954 (S.I., 1954, No. 120), effective from February 8, exempts all the substances and preparations described at the head of the monographs or formulary of the British Veterinary Codex. The Order also exempts mixtures of one or more substances described in the B.Vet.C. with substances described in the British Pharmacopœia, British Pharmaceutical Codex, Drug Tariffs, etc., whether or not compounded with an excipient, vehicle, base or preservative. The labelling, packing and other conditions applying to B.P. and B.P.C. preparations when supplied free of tax also apply to B.Vet.C. preparations.

Representations to the Chancellor

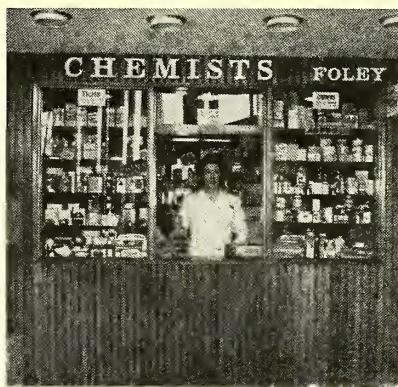
THE Association of British Chambers of Commerce has sent a memorandum to the Chancellor of the Exchequer welcoming recent purchase tax reductions but urging further and more substantial reductions in the Budget. The National Union of Manufacturers has also made representations, but calling

for outright abolition of the tax. The Union stresses "the essential need for a drastic reduction of taxation" and says that the primary purpose of economic and budgetary policy should be to restore the country to a condition in which it can earn its keep in a competitive world. The 1953 Budget is acknowledged to have provided an incentive for the first time for many years. That policy "should go farther and faster. . . . The present excessive level of taxation does not provide a sufficient margin of reward for industrial effort or for risk successfully undertaken. Enterprise and hard work are in consequence discouraged." If for revenue reasons purchase tax cannot be abolished at one stroke, it should be restricted as an interim step to the lowest rate now charged.

MEDICAL GASES

Monopoly inquiry

IT was announced in a written reply to a Parliamentary question by the President of the Board of Trade on February 9 that a new reference had been made to the Monopolies Commission to investigate and report on the supply in the United Kingdom of certain gases used mainly in industry and medicine (namely, oxygen, dissolved acetylene and propane). Their report is to cover both the facts of the matter and the bearing of the facts on the public interest. Any person or organisation wishing to offer evidence on this subject should write to the Secretary, Monopolies and Restrictive Practices Commission, 3 Cornwall Terrace, Regent's Park, London, N.W.1.



BUS STATION PHARMACY: First pharmacy at a transport terminal in Ireland has been opened by the brothers Mr. Con Foley, M.P.S.I., and Mr. John T. Foley, M.P.S.I. They have taken over one of the bijou shops at the new bus terminal in Store Street, Dublin. The pharmacy has a teak front, carries a full range of toilet items and cosmetics, films, proprietaries, medicinals, etc., and takes in prescriptions. It is managed by Mrs. Ita O'Callaghan, Ph.C.

AGRICULTURAL POISONS

Report on residues in food

A REPORT ("Toxic Chemicals in Agriculture—Residues in Food," H.M. Stationery Office, price 1s. 6d.) dealing with possible risks to consumers arising from the use of toxic substances on agricultural products and in the storage of food, was published on February 9. It states that there is no evidence of human illness arising from toxic substances in current use but that the position must be kept under continuous review and therefore recommends that an advisory committee should be established. The Ministry of Agriculture and Fisheries has accepted the recommendation and Professor S. Zuckerman (chairman of the working party that prepared the report) has agreed to act as chairman for an initial period. The committee is to be assisted by such subcommittees of experts as it may find necessary. Discussions with the Association of British Insecticide Manufacturers have shown that it should be possible to arrange that new toxic substances proposed for use on agricultural products are notified to the committee in such a way as to prevent premature general disclosure. The report recommends that consideration should be given to whether, because of possible risks to public health, the use of bacterial rodenticides should be avoided, and to the registration of all firms or individuals that apply toxic substances to agricultural products.

ALCOHOL ANALYSIS

Application to road safety

A REPORT on "The Determination of Alcohol in Blood and Urine" has been presented by a panel of analysts appointed by the Royal Institute of Chemistry to assist the alcohol and road accidents committee of the British Medical Association in the preparation of their report on "Recognition of Intoxication," due to be published in the next few weeks. A survey of the report was presented at a joint meeting of the Society for Analytical Chemistry and the Royal Institute of Chemistry held in London on January 20, Sir Harry Jephcott (president of the Royal Institute of Chemistry) in the chair. The methods recommended, which are: (1) an amended Cavett micro method and (2) the macro method of Kozelka and Hind, were discussed, and a statistical examination of the analytical results obtained in the final collaborative tests was given.

BRITISH COUNCIL

Scholarships abroad

THE British Council has published a booklet giving details of over 100 scholarships offered to British students by sixteen foreign countries for study abroad during the academic year 1954-55. The scholarships are intended mainly for graduates and undergraduates of United Kingdom universities but some are also open to those with non-academic qualifications. The awards, which provide for free tuition and maintenance, are tenable for from four to twelve months. The closing dates for receipt of applications varies

for each country, the earliest date being March 8. Full particulars and application forms may be obtained, on receipt of a stamped addressed foolscap envelope, from any British Council office in the United Kingdom, or from the Controller, Education Division, The British Council, 65 Davies Street, London, W.1.

CENSUS REPORT

Wholesale trading in 1950

SOME preliminary figures derived from the returns made by wholesalers in the Census of Distribution and other Services, 1950, have been given by the Board of Trade. During that year there were 1,400 wholesale establishments dealing in chemicals, oils and drugs. The value of their sales was £719·4 millions; the number of persons engaged, 34,476; and the amount paid out in wages and salaries, £12·7 millions. The full report will not be available until later in the year.

LOCAL NEWS

National Formulary Pitfall

SHEFFIELD Executive Council decided at a recent meeting to ask doctors to use the 1952 National Formulary when writing prescriptions, or, if that was not available, to write the formula in full. The Council approved a report of its pharmaceutical services subcommittee, which had found lack of care in the dispensing of a prescription at a pharmacy, and recommended that £2 2s. should be withheld from the payment of the contractors concerned. The branch manageress who dispensed the prescription said that, in view of the analyst's report, she could only conclude that she had used the 1949 formulary instead of the 1952 edition. Mr. C. W. Hobson (chairman, Sheffield Pharmaceutical Committee) said there had been several changes in the Formulary in the past ten years. He thought the matter should be dealt with nationally, rather than locally.

Forged Prescription Warning

CHEMISTS in Walsall, Staffs, have been warned by the local Executive Council to look out for forged EC10 forms following the theft of a pad of prescription forms from a doctor's car. It is thought possible that a drug addict is responsible for the theft.

IRISH NEWS

Ulster Chemists' Association

AT the February meeting of the Executive Committee of the Ulster Chemists' Association, Mr. H. G. Campbell (president), in the chair, a letter was received from Dr. F. Mallinson, which thanked the Committee for their sympathy expressed on the recent death of his father, Mr. G. A. Mallinson. The secretary (Miss A. E. Strachan) reported that she had represented the Association at the memorial service to the late Mr. Mallinson in London on January 28. The president gave a report of the annual meeting of the Chemists Federation held in London on January 29 which he attended in company with Mr. J. Caldwell (representative to the C.F. Council), Mr. R. J. Jeffers (chairman of

Northern Ireland C.F. Committee) and the secretary. The following were elected to membership:—Mr. T. Bogues, Ph.C.N.I., Abbott's Cross, Belfast; B. Cochrane, Ltd., 1B Clonard Street, Belfast; Mr. A. W. Wilson, Ph.C.N.I., 23 Clandeboye Road, Bangor; Mr. H. R. Kelly, Ph.C.N.I., 141D High Street, Holywood. A number of employees, whose applications had been approved at a previous meeting of the Associates' Committee, were elected to associateship. In response to a request from the Minister of Labour and National Insurance for nomination of members to serve on the local tribunal panels, Messrs. J. McGregor and W. L. McDonnell were nominated for Belfast, and the secretary was instructed to ask the local associations to nominate members for their particular areas. Considering a member's suggestions on alterations to the rota service in Belfast, the secretary reported that a joint meeting with members of the Local Pharmaceutical Committee was being held to review the service, but, before any major alterations were made, a meeting of members would be called to discuss the matter. A subcommittee was appointed to organise a whist drive on March 24 in aid of the Northern Ireland Chemists' Benevolent Fund.

Northern Ireland C.F. Committee

AT a meeting of the Northern Ireland Committee of the Chemists Federation held in Belfast on February 5, the secretary (Miss A. E. Strachan) reported that Mr. C. J. Hall (Evans Medical Supplies, Ltd.) had been re-elected manufacturers' representative on the Committee by the C.F. Council, Messrs. Fred Storey, Ltd., had been re-elected wholesalers' representative by the Northern Ireland C.F. wholesalers, and Mr. J. Caldwell had been reappointed by the Executive Committee of the Ulster Chemists' Association to the C.F. Council for a further period of two years. The following office-bearers were elected for 1954-55: Chairman, Mr. H. G. Campbell; Vice-chairman, Mr. Fred Storey; Secretary, Miss A. E. Strachan. The composition of the Northern Ireland Committee for 1954-55 is as follows: Manufacturers' representatives:—Mr. R. J. Jeffers (Allen & Hanburys, Ltd.), Mr. C. J. Hall (Evans Medical Supplies, Ltd.). Wholesalers' representatives:—Thomas McMullan & Co., Ltd., Fred Storey, Ltd. Retailers' representatives:—Messrs. H. G. Campbell, J. Caldwell, C. L. Gordon-Rattie and W. J. Moffett.

Statutory Committee

THE Statutory Committee of the Pharmaceutical Society of Northern Ireland has announced that the name of James Desmond McCafferty, 63 Strand Road, Londonderry, is being restored to the Register as from February 13. Mr. McCafferty's name was removed in October 1953, after the Committee had held that he had been guilty of misconduct in keeping his premises open and dispensing medicines at times when he was not required to do so by the rota arrangements of the General Health Services Board (see C. & D., 1953 II.388).

SCOTTISH NEWS

Support for Rural Chemists Urged

AN appeal for rural communities to support local chemists beyond getting medicines from them by buying accessories which they often get from the grocer or newsagent was made at a meeting of Perth Executive Council on January 27. Dr. J. O. McDonagh (chairman) who made the appeal, said there was a distinct threat that the pharmacy in Aberfoyle might close down. Though the business was on the market, there was no sign of a purchaser.—In Patna, Ayr, the only chemist may have to give up his shop if he cannot find suitable housing accommodation in the area after March 31. He is a sub-tenant but has been told he must be out of the house by that date at the latest, and his application for a council house brought the reply that the present waiting period was three years. He could not be given any priority, moreover. Mr. J. B. Wilson (the chemist concerned) asked the Ayrshire Executive Council for its support in his application for a house. At a meeting in Kilmarnock, recently, members were informed that no priority would be given in a case of that kind by Ayr county council. The Executive Council decided to continue the case for further information.—A dispensing service, 6.30-8 p.m. nightly, is being given at the pharmacy that was closed in Auchinblae recently (see *C. & D.*, February 6, p. 123).

Resolution on Purchase Tax

THE following resolution, passed at a recent quarterly meeting of the Aberdeen Pharmaceutical Association, has been sent to the Chancellor of the Exchequer:—

"The Aberdeen Pharmaceutical Association suggests that the Chancellor of the Exchequer should remove Purchase Tax from all medicines including proprietary medicines. As a tax on medicine is a tax on illness it seems to us unfair, and if the tax on household remedies was removed it would possibly ease the demand on the National Health Service. Furthermore the removal of tax would show the true cost of the N.H.S. without the incidence of purchase tax, and would simplify the pricing of prescriptions by the pricing bureaux and chemist contractors."

NEWS IN BRIEF

British Pharmaceutical Conference.—The secretaries of the British Pharmaceutical Conference announce that the 1954 meeting is being held in Oxford from September 13 to 17 inclusive.

B.M.A. Evidence on N.H.S. Costs.—The British Medical Association recently sent a memorandum of evidence to the Guillebaud Committee (which investigates the costs of the National Health Service).

Fowl Pest Control.—To control the spread of fowl pest, the Minister of Agriculture has made an Order (S.I., 1954, No. 121) prohibiting the movement of poultry, except day-old chicks or hatching eggs, into Wales, Cheshire, Derbyshire, Shropshire, Staffordshire, Herefordshire, Warwickshire and Worcestershire from any other part of Great Britain.

TOPICAL REFLECTIONS

By Xrayser

A Threat to Unity

From two areas, Glasgow and North Staffordshire, comes news of what, if not checked, may result in a split in the ranks of pharmacists in business. The Glasgow and South-western Scottish Branch of the Pharmaceutical Society has passed a resolution (p. 124) condemning as unethical the keeping open of a pharmacy in excess of normal hours; the secretaries of the North Staffordshire Branch, in a letter to the Editor (p. 134), state that non-observance of regular hours of service is causing friction. This irregularity is a matter of concern, not only to contractors but also to all registered pharmacists. In contracting to undertake National Health Service dispensing, there is an implied assurance that the contractor will play the game. Otherwise the way to anarchy is open. Nothing would give the enemies of pharmacy much greater satisfaction than to know that it was a divided profession. But it is not our British way to judge anyone unheard. So let one, or preferably several, of the advocates of a keep-open-when-you-like policy step forward boldly and address meetings of pharmacists in support of that policy. They will no doubt receive ample publicity. If they can persuade the majority of owners of businesses to follow them, a new situation will arise: if not, they may themselves be enlightened.

Nursing Feverish Patients

Your latest instalment of "Essentials of Treatment" (pp. 138-39) sets forth hints that pharmacists, especially those in business, should know. If, at the counter, a qualified man or woman only tells an inquiring customer something that has already been imparted by a medical practitioner or a nurse, there is nevertheless a satisfaction, and some kudos, in giving the information. Writing on cases in which pyrexia is present, your contributor confirms a view—held as strongly, I believe, as ever it was—that much depends on the nursing. The insistence on keeping a patient in bed long enough is very important. About a year ago I was interested in a case of this kind. One day the doctor was asked if the patient might get up while the bed was being made; his "Certainly not" was emphatic. Recovery was slow but steady. The remark that tablets taken internally may, unless first crushed, cause gastric irritation is not new, but was worth repeating: tablets swallowed whole may even bring on haematemesis. Finally, the advice to those in charge to make food as attractive as possible is useful. The dreariness of a long illness is accentuated by the monotony of daily helpings of food each resembling that which has preceded it.

Priestley

Priestley belongs to the select company of scientists who are so well known as to need only surnames for identification. I am glad that Dr. Bett has remembered the hundred-and-fiftieth anniversary of his death (p. 137). The main circumstances of his life were related by Mr. William Kirkby in connection with the bicentenary of his birth (*C. & D.*, 1933, I, 256-57). Two facts in his career in addition to his chemical and physical discoveries are of general interest. One is that some theological pamphlets written when he was a minister became "best sellers"; the other is that the phrase "the greatest happiness of the greatest number," often assigned to Bentham, has been traced to Priestley. No question of priority in the isolation of oxygen need arise. It was discovered about the same time, independently, by Priestley, Scheele, and Bayer (a French apothecary). His residence for some years next door to a Leeds brewery may be considered a fortunate chance; he resorted there in order to see what he could do with "fixed air." A list of gases separated by him includes nitric oxide, nitrous oxide, ammonia, hydrochloric acid, sulphur dioxide, and nitrogen. He deserved a better fate than the loss of books and manuscripts by mob violence. His dignified letter of farewell to Birmingham after the riot is a model of courteous forgiveness.

BRANCH AND ASSOCIATION MEETINGS

DARTFORD

British Veterinary Codex

In an address on the "British Veterinary Codex" to the Dartford Branch of the Pharmaceutical Society on January 26, DR. R. F. MONTGOMERIE described the setting-up of the British Veterinary Codex Committee, the formation of the subcommittees, and the work that preceded the production of the book and gave a *résumé* of its contents. He said that the first British Veterinary Codex was a great achievement, and much credit was due to the committees and the many correspondents who had assisted them in its production. It would be of great value to veterinary surgeons, pharmacists, teachers and students, and it was hoped that its standards would soon be adopted throughout the Empire.

ROMFORD

Knowledge of the Thyroid

At the January meeting of the Romford Branch of the Pharmaceutical Society on January 18, DR. J. H. WILKINSON (Westminster Hospital) gave an address on "Some Additions to our Knowledge of the Thyroid Gland." DR. WILKINSON described a method of biological estimation of various alkyl esters of di-iodohydroxybenzoic acid as thyroid-hormone inhibitors, using mice as the test animal. Esters having the highest partition coefficient in olive oil and a phosphate buffered aqueous solution were found to be the most active inhibitors, and on that basis butyl-di-iodohydroxybenzoate (BHDB) was chosen for clinical trial in selected cases of thyrotoxicosis. Symptomatic improvement and alteration in weight were at first dramatic, but the improvement was not maintained, and the drug had to be abandoned.

SOUTH SHIELDS

Coroners' Work

SOUTH Shields Pharmacists' Association at its meeting on January 11 was addressed by MR. E. C. GLENTON (deputy coroner for South Shields) on the duties and powers of a coroner. Mr. Glenton said that the local authority was responsible for choosing the coroner, who must be either a doctor or a solicitor, and the Home Office confirmed the appointment. Once appointed, a coroner was relieved of his duties only in case of serious misdemeanour. When carrying out his duties a coroner was not liable to arrest, and in court he could not be proceeded against for slander. His main duty was to inquire into all cases of violent or sudden death when the cause was unknown. All deaths in prisons, factories and mines must be reported; also deaths of people of unsound mind, drunkards in homes, children under the age of nine years boarded out for reward, and patients dying under an anaesthetic. The coroner must decide whether an inquest or an inquiry should be held, but he must have reasons for holding an inquest. He must be notified where the body lay and must see it before holding the

inquest or inquiry. He might refuse permission for removal of the body. A coroner's court was a court of record, and the coroner was the judge. It might not be held on a Sunday or on licensed premises, and must be held in public unless national security was involved. The coroner might admit hearsay or written evidence. Any witness who might incriminate himself by answering questions could refuse.

KINGSTON-ON-THAMES

English v. Latin

WIMBLEDON and Thames Valley Branches of the Pharmaceutical Society held a debate at Kingston-on-Thames on January 14 on the motion "That this meeting deplores the tendency to re-

gard Latin in pharmacy as outmoded." The motion was proposed by MR. A. G. SHAW who regretted the tendency towards change for its own sake. He felt that the difficulty of coining reasonable names for new chemical compounds, which had been put forward as a reason for dropping the use of Latin, could be overcome. MR. T. JAMES, seconding, stressed the psychological value of the secrecy Latin gave. MR. H. S. FENTON opposed. He said that, while the need for secrecy a century or two ago was readily understandable, there was little need for it now. MR. N. C. JEFFERY, seconding, said that dangers might arise if a new generation of doctors were to attempt to use Latin with an insufficient understanding of it. The motion was carried.

LOCAL DINNERS AND DANCES

GRIMSBY

Close Doctor-chemist Link

PROPOSING the toast to the guests at the annual dinner and dance of the Grimsby Pharmacists' Association at Cleethorpes on January 28, MR. W. S. PROCTOR claimed that the liaison between doctors and chemists in the area was closer than in any other place in the country. MR. G. G. FIRTH (president of the Association) declared that the public in the district was receiving a prescription dispensing service equal to any in the country under the National Health Service. Mr. Firth referred to the great changes in practice during the nearly sixty years of the branch's life, and said that many of the "old faithful" drugs had disappeared. In their place new remedies were appearing at such a rate that both the doctors and chemists were finding it difficult to keep up with them.

HUDDERSFIELD

Health Service Costs Defended

FORTHRIGHT comment on domestic issues came from MR. H. STEINMAN (a member of the Pharmaceutical Society's Council) at the annual dinner and dance of the Huddersfield Branch of the Society recently. Mr. Steinman was responding to a toast to the Society proposed by the mayor of Huddersfield. The mayor had said that chemists were playing a great part in the National Health Service and that that

was due in no small measure to the high standard of professional conduct and ability required of its members by the Pharmaceutical Society. MR. STEINMAN said that to go to public functions and be patted on the back about the part pharmacists were playing "is very nice in its own way, but those people can do something for us in the wider sphere of national politics." The pharmaceutical service seemed to have become the whipping boy, although its cost was only 8 to 10 per cent. of the whole of the National Health Service. The government, he contended, must be told that if it drove a hard bargain with the pharmacists it would not get the best service. It did not follow that because prescribing might be expensive it was necessarily extravagant. Mr. Steinman congratulated the Huddersfield Branch on its "amazing and magnificent efforts" on behalf of the Benevolent, Birdsgrove House and Orphan Funds. Discussing the Society's educational policy, Mr. Steinman said that there had recently been embodied in the Education Committee three teachers and three examiners and it was hoped that those experts would help to modify the examination curriculum so that a pharmacist, when registered, was a practical individual rather than a greater theorist.

AT HOUNSLAW BRANCH DANCE: Mr. F. W. Adams (a secretary and the registrar of the Pharmaceutical Society), Mrs. Adams, and the mayor and mayoress of Heston and Isleworth, were guests of honour at the annual dance of the Hounslow Branch of the Society in Hounslow on January 29. With them are Miss E. M. Bristow (chairman), Messrs. J. L. L. Heppenstall (vice-chairman), S. G. Davis (secretary), W. Waterman (treasurer), and Miss A. R. Williams (social secretary). Largest contingents of guests, and there were present at the function over 250, came from the West Middlesex Hospital, Parke, Davis & Co., Ltd., and Vitamins, Ltd.



IRISH WHOLESALERS' DINNER

MORE than sixty members and guests were present at the annual dinner of the Wholesale Drug Federation of Ireland, held recently in Dublin. The event was one of the largest and most successful functions yet held by the Federation. Mr. Michael G. Durcan (a director, United Drug & Chemical Co., Ballina, and chairman of the Federation) presided and the attendance included representatives of all leading wholesale houses in the Republic. The table-top guests included Messrs. Michael Costello (president, Pharmaceutical Society of Ireland), P. F. McGrath (vice-president), James G. Coleman (registrar), T. R. Bourke (president, Irish Drug Association), Donald Boyd and Robert Beck.

Notable Chairmen

The toast of Ireland having been honoured, Mr. HUGH G. SMITH proposed "The Wholesale Drug Federation of Ireland." He recalled the many notable people in Irish pharmacy and the drug trade who had occupied the chair of the Federation since its formation about seventeen years ago. Many of the foundation members were present that evening, including Messrs. Alex Davidson, Sam McAuley, W. R. Such and Alex Hughes. For the first time the Federation had a man from the Provinces in the chair. Mr. Durcan was one of the leading men in pharmacy in Connaught. A special welcome must also be given to Mr. Donald Boyd who was head of one of the oldest Dublin drug houses. Though small in numbers, the wholesale drug houses played a vital part in the health services of the State. The work of wholesale houses in keeping pharmacies supplied had grown enormously since 1900. It was a tribute to the wholesale trade that, despite the widespread territory they had to cover, the medicinal and drug needs of the State were always so competently and well filled. THE CHAIRMAN, responding, thanked Mr. Smith for his good wishes. As one with experience of both the retail and wholesale sides of the business he realised the problems each side met with from time to time. He looked forward to cordial relations with their parent organisation the Irish Drug Association and with retail chemists and druggists all over the State.

"Our Guests" was proposed by Mr. DONALD W. P. BOYD, who specially welcomed the president, vice-president and registrar of the Pharmaceutical Society of Ireland, whom he congratulated on the great strides made within the past two years in improving pharmaceutical education. He also referred to Messrs. T. R. Bourke (president, I.D.A.) and Brendan R. Smith (its secretary) and John O'Brien (director, Federated Union of Employers). MR. M. COSTELLO, responding, said the framers of the original Pharmacy Act of 1875 had never foreseen the growth of so many organisations around the profession, such as the Federation, the I.D.A., and the Guild of Pharmacy. In the title chosen for their own body the wholesalers had



Left to right: Mrs. Costello, Mr. Robert Peck (chairman, May, Roberts (Ireland), Ltd.), the president of the Pharmaceutical Society of Ireland (Mr. M. Costello) and Mr. Michael Durcan (chairman, Wholesale Drug Federation).



Left to right: Mr. John Holland (P. C. Cahill & Co., Ltd.), Mr. P. F. McGrath (vice-president, Pharmaceutical Society of Ireland), Mr. J. Hegarty (P. C. Cahill & Co., Ltd.), and Mr. Brendan Smith (secretary, Irish Drug Association).

hit upon the apposite word "Federation," which was all-embracing. MR. T. R. BOURKE, also responding, thanked

the Federation for information which enabled them to keep their members up-to-date on price movements.

NAME REMOVED FROM REGISTER

Statutory Committee Decision

THE Statutory Committee of the Pharmaceutical Society of Great Britain at a meeting on February 3 directed that the name of John David Williams whose address in the Pharmaceutical register is Cynlas, Dolwyddelan, Caernarvonshire, should be removed from the register, following an investigation into complaints that while employed as a locum tenens in two different pharmacies he had been under the influence of drink or drugs sufficiently to render him incapable of being in charge of the pharmacies. Mr. Williams did not attend nor was he represented at the meeting. MR. A. C. CASTLE (solicitor to the committee) suggested that Mr. Williams had been partaking of drugs rather than drink. One assistant from each of the two pharmacies was present to give evidence. The first said that he had seen Mr. Williams, soon after his arrival at the shop, drinking a quantity (which he believed to be about three fl. oz.) of tinct. camph. co. His manner was unusual: when he moved he shuffled, mostly leaning on the fixtures, and several customers had commented upon the look on his face. The second

witness described Mr. Williams's demeanour as "dopey" and stated that he had asked for the location of the paregoric supply as soon as he entered the shop for the first time. Medical evidence was submitted and showed that Mr. Williams had suffered from many complaints, originating from war service—malaria and chronic rheumatism, and now he was a victim of arterio sclerosis and coronary thrombosis.

THE CHAIRMAN (Mr. P. A. Scott Cairns, Q.C.) asked whether the complaints from which Mr. Williams suffered could account for his "dopey" condition. MR. CASTLE said he would have said not.

Announcing the decision of the committee THE CHAIRMAN said that Mr. Williams's illness had been taken into account but misconduct had been found against him which was such that in the public interest, and perhaps in his own, his name should be removed from the register. He could apply for restoration at some later date when the committee would require to be satisfied that he had freed himself from his addiction to drugs.

DEATHS

ADAMS.—On January 9, Mr. James Edgar Adams, M.P.S., 1326 Warwick Road, Acocks Green, Birmingham, 27, aged seventy-three.

BARRATT.—Recently, Mr. Herbert Barratt, M.P.S., 942 Ecclesall Road, Sheffield, Yorks. Mr. Barratt qualified in 1888.

BELL.—At his home, The Medical Hall, Bailieboro, co. Cavan, recently, Mr. Joseph Bell. Mr. Bell passed the Registered Druggist examination of the Pharmaceutical Society of Ireland in 1925.

CARRUTHERS.—At a nursing home on January 25, Mr. James Miller Carruthers, 27 Meadowhouse Road, Edinburgh. Mr. Carruthers was a member of the staff of H. C. Baildon & Son, chemists, 73 Princes Street, Edinburgh, for forty-nine years and at the time of his death he was cashier at the company's factory. A well-known figure in Scottish Masonic circles, Mr. Carruthers was a past provincial grand secretary of the Provincial Grand Lodge of Midlothian and for twenty years he was a member of the committee of the Grand Lodge of Scotland. He was also proxy district grand master of New Zealand South.

CLIFFORD.—In a Cambridge hospital recently, Mrs. Doris Clifford, aged fifty-five, wife of Mr. J. G. Clifford, M.P.S., 12 The Causeway, Godmanchester, Hunts.

CORNICK.—On January 10, Mr. Ernest Edward Cornick, F.P.S., 5 The Parade, Maidenhead, Berks, aged seventy-six.

COTTLE.—On January 19, Mr. Arthur James Cottle, M.P.S., The Royal Pharmacy, High Street, Alfreton, Derbyshire, aged sixty-six.

DENTON.—On January 19, Mr. Joseph Denton, M.P.S., 68 Skipton Road, Ilkley, Yorks, aged seventy-seven.

FURST.—On February 4, Mr. Solomon Furst, M.P.S., 17 Titwood Road, Moray Park, Glasgow. Mr. Furst qualified in 1915.

GUY.—Recently, Mr. Jack Guy, M.P.S., 4 Finghall Road, Flixton, nr. Manchester. Mr. Guy qualified in 1920.

HANNA.—At a Donaghadee nursing home, on February 3, Mr. William Hanna, J.P., aged ninety-one. Mr. Hanna qualified as a pharmaceutical chemist in Dublin in 1889 and was the founder of Hanna's Pharmacy, Main Street, Bangor, co. Down, from which he retired some twenty years ago. He served his apprenticeship with Grattan & Co., Ltd., Cornmarket, Belfast. He was a magistrate for co. Down and sat regularly on the local Bench.

KITCHING.—On November 18, 1953, Mr. Joseph Winston Kitching, M.P.S., 498 Thornton Road, Girlington, Bradford, Yorks. Mr. Kitching qualified in 1927.

LEVIE.—In the Cameron Hospital, West Hartlepool, co. Durham, on January 9, Mr. Thomas Joseph Pole Levie,

21 Stanhope Avenue, West Hartlepool, aged eighty-one. Mr. Levie qualified as a chemist and druggist in 1895.

LOVETT.—Recently, Mr. Edward Norman Lovett, Knightlow Road, Harborne, Birmingham, aged sixty-two. Mr. Lovett was a director of Jarrett, Rainsford & Laughton, Ltd., and subsidiary companies, Stratton & Co., Ltd., and Twinco, Ltd. He joined the company over forty years ago and for the last twenty years had been general manager of the export department. He had visited nearly all the Continental markets regularly before and since the 1939-45 war and had many friends in Norway, Sweden, Denmark, Holland, Belgium, France, and latterly, Italy. He is survived by his widow and three children.

MANN.—Recently, Miss Louisa Marguerite Mann, M.P.S., 24 Derby Road, Bournemouth, Hants. Miss Mann was registered in 1920 in pursuance of Section 4 of the Poisons and Pharmacy Act, 1908.

MARR.—Recently, Mr. Arthur William Harrott Marr, M.P.S., The Square, Rosehearty, Fraserburgh, Aberdeens, aged fifty-nine. Mr. Marr was a native of Aberdeen. He took an active interest in local affairs as a member of the town council. He was a former president of the Fraserburgh golf club and chief observer at Rosehearty during the 1939-45 war.

MORGAN.—On January 9, Mr. John Charles Morgan, M.P.S., 292 Gray's Inn Road, London, W.C.1, aged fifty-eight.

PECHEY.—On January 18, Mr. William George Pechey, M.P.S., Sunnyside, Polstead Street, Stoke-by-Nayland, Suffolk, aged sixty-three.

RICHARDS.—Recently, Mr. William David Richards, M.P.S., 1 High Street, Margate, Kent, aged sixty-two. Mr. Richards was governing director of D. T. Evans, Ltd., chemists, Margate. He was chairman of the local branch of the Pharmaceutical Society for several years, and represented pharmacy on Margate Chamber of Commerce. He leaves a widow and two step-sons.

SELLORS.—On December 25, 1953, Mr. Reginald Vivian Sellors, M.P.S., 26 Bushey Mill Lane, Watford, Herts. Mr. Sellors qualified in 1905 and was in business at 364 St. Albans Road, Watford, until he retired in September 1953, because of ill health.

SHAKESPEAR.—On January 13, Mr. William Shakespear, F.P.S., 66 Dora Road, Birmingham 10, aged eighty-four.

STEPHENS.—On January 11, Mr. Frederick McKenzie Stephens, M.P.S., 1 Fern Bank, West Alvington, Kingsbridge, Devon, aged seventy-four.

STRATFORD.—On January 28, Mr. Rupert George Thomas Stratford, M.P.S., 12 Newton Road, Mumbles, Swansea, Glam, aged fifty-five.

WHARTON.—On October 24, 1953, Mr. Fred Wharton, M.P.S., 9 Manchester Road, Denton, Manchester, and formerly of 26 Park Road, Rom-

ley, Ches. Mr. Wharton qualified in 1925.

WILLS.—On January 15, Mr. Leonard Eugene Wills, Polpentre, Polwithen Road, Penryn, Cornwall, formerly of Carn-Hyr, The Lizard, Cornwall, aged sixty-eight. Mr. Wills qualified as a chemist and druggist in 1906 and passed the Pharmaceutical Chemist examination in 1907.

WHYTE.—On December 16, 1953, Miss Katherine Drummond Whyte, M.P.S., 57 Guthrie Port, Arbroath, Angus. Miss Whyte qualified in 1912.

WYATT.—On January 21, Mr. Alvan Lovell Wyatt, M.P.S., 90 Spring Road, Letchworth, Herts, aged eighty-seven.

BUSINESS CHANGES

THE Canterbury branch of Savory & Moore, Ltd., has been transferred to 20 Burgate.

MR. H. C. LACEY, M.P.S., opened a pharmacy at 187 Hawfield Lane, Winshill, Burton-on-Trent, on February 1.

Appointments

JOHN RICHARDSON & CO. (LEICESTER), LTD., Evington Valley Road, Leicester, have appointed Mr. T. A. Cole, 32 Jubilee Road, St. George, Bristol, 5, their representative for South Wales and Bristol.

OVERSEAS VISITS

MR. O. F. MORGAN (home sales director, Glaxo Laboratories, Ltd.), sailed from Southampton on February 10 on a business trip to the United States. He expects to be away until the end of May. In his absence Mr. L. F. Kitch, M.P.S., will act as home sales manager.

MR. G. J. CHAMBERLIN (managing director, The Tintometer, Ltd.) will be in America from June 8 to July 14 on a business visit and will be attending the Convention of the American Society for Testing Materials in Chicago, June 14-18; and the meeting of the Canadian Institute of Chemistry in Toronto, June 21-23.

PERSONALITIES

DR. T. E. WALLIS (emeritus curator, Pharmaceutical Society's museum) has been elected president of the Royal Microscopical Society, 1954-55.

SIR ROBERT ROBINSON, Waynflete professor of chemistry at Oxford University and winner of the Nobel prize in 1947, has been made an associate member of the Japanese Academy.

MR. H. T. SMETHURST, a newly appointed director of Neville Brown & Co., Ltd. (see p. 152) has been in the photographic trade all his life. He started his career at the Manchester branch of Thompson & Capper, chemists, and after the 1939-45 war became manager of the Oxford Street, London, branch of the Westminster Photographic Exchange. Later he became photographic buyer at Timothy Whites and Taylors, Ltd.

RIGHT TO COMPULSORY LICENCE

AN action over the right of The British Drug Houses, Ltd., London, N.1, to apply for a compulsory licence to enable them to manufacture and sell chloramphenicol, an antibiotic patented by Parke, Davis & Co., Inc., and manufactured by their English subsidiary at Hounslow, Middlesex, under the registered trade mark Chloromycetin came before the House of Lords on February 8. Messrs. Parke, Davis appealed from a judgment of the Court of Appeal, affirming an order of the Queen's Bench Divisional Court, refusing their motion for an order to prohibit the Comptroller-General of Patents from considering an application by the B.D.H. under section 41 of the Patents Act, 1949. The appeal was heard by the Lord Chancellor (Lord Simonds), Lords Oaksey, Morton, Asquith and Cohen.

For Messrs. P. D. & Co. Mr. D. N. Pitt, Q.C., said that there was no dispute that the patents forming the subject of the application came under the special provisions of the Patents Act for dealing with food or medicine, or that they were less than three years old. The question was whether the Comptroller of Patents had any jurisdiction to grant the compulsory licence sought by the B.D.H. or, as he contended, should be prohibited from proceeding with the application on the ground that it was made before the expiry of three years from the date of issue of the patents. The question turned entirely on the construction of Article 5A(4) of the International Convention for the Protection of Industrial Property, ratified by Britain in 1938. By section 41(1) of the Patents Act it was laid down that

" . . . where a patent is in force in respect of . . . a substance capable of being used as food or medicine or in the production of food or medicine . . . the Comptroller shall, on application made to him by any person interested, order the grant to the applicant of a licence under the patent on such terms as he thinks fit, unless it appears to him that there are good reasons for refusing the application."

Section 45(3) of the Act stated:

" No Order shall be made in pursuance of any application under Sections 37-42 of this Act which would be at variance with any treaty, convention, arrangement or engagement applying to the United Kingdom and any convention country."

The words "convention country," said Mr. Pitt, included the United States. Then Paragraph 4 of Article 5A of the International Convention stated:

" In any case, an application for the grant of a compulsory licence may not be made before the expiration of three years from the date of issue of the patent, and this licence may only be granted if the patentee is unable to justify himself by legitimate reasons. . . . "

Paragraph 4, said Mr. Pitt, should not be construed merely in the light of the law of England, and it would be wrong to say that, merely because it did not mention medicine, it did not apply to medicine. He contended that what Paragraph 4 meant was that in any case where, in any country, an application for a compulsory licence, on any grounds, was being considered, the

country concerned agreed to impose the three-year prohibition. It had been held in the courts below that the opening words "In any case," which were a translation from the French, meant only "In any case where an application for a compulsory licence was based on some form of abuse," and had nothing to do with Section 41. He claimed that the words did not allow of such a construction, and that "abuse" was too imprecise a term to provide a good foundation for an argument on construction. Section 41 was just as concerned with abuse as Section 37.

THE LORD CHANCELLOR: Has it not been held that you are allowed a little more latitude in construing the context of international agreements than in

construing Acts of Parliament?

MR. PRITT: I submit that an English court which has to obey a statute should apply to a convention the same principles as are applied to the statute.

Referring to the suggestion that it would be wrong not to allow the public the benefits in food and medicine arising from private research, he said that in every country it was recognised that there had to be some infringement of the public good by giving private people a monopoly in order to ensure that, risking failure, they would bear what might be the colossal expenses of research. There were balancing obligations as between the public good and private interest, and if a new discovery was not taken up a remedy was provided by Section 46 of the 1949 Act.

Judgment was reserved.

THE WEEK IN PARLIAMENT

ON February 4, MR. ARTHUR LEWIS asked the Chancellor of the Exchequer whether, in his forthcoming Budget, he would consider removing all charges made to users of the National Health Service. The answer was "No, sir."

Cola Drinks

Addressing the House of Commons on February 4, DR. BARNETT STROSS suggested to the Parliamentary Secretary to the Ministry of Food that the formula of cola drinks (see *C. & D.*, February 6, p. 128) should be published on the label. The public should know how much sugar, phosphoric acid and caffeine they contained. THE PARLIAMENTARY SECRETARY (Dr. Charles Hill) said that he did not exclude the possibility of labelling to indicate the contents to the public, but when the requirement was demanded for proprietary medicines the chemical formula that subsequently appeared on the labels conveyed nothing to the public. Soft drinks were being scrutinised by the Food Standards Committee.

Availability of Drugs

On February 3, LORD SAMUEL asked the Government whether it was the case that a patient requiring treatment by ACTH or cortisone could obtain it if he was registered under the Health Service but not otherwise; and if so, whether the regulation controlling the supply of those drugs would be altered to remove that discrimination.

LORD WOOLTON: The short reply is in the negative. The Minister of Health is glad of the question because it will enable him to remove any uncertainty in the matter. The supply of ACTH and cortisone is controlled but there is no question of a patient's having to be registered under the National Health Service to obtain them. The drugs are supplied only to hospitals that have the necessary laboratory facilities and experienced medical staff to use them. They may be given to private or other patients at the hospitals. Other doctors or hospitals can get supplies of the drugs from those selected hospitals if they are needed to treat one of a limited number of conditions in which they may be necessary to save or pro-

long life. Those supplies are available to private patients but on payment. LORD TEVIOT said he had had personal experience that some people's lives were being endangered through the difficulty, if not the impossibility, of obtaining those drugs.

Purchase Tax

The Purchase Tax (No. 1) Order, 1954 (see *C. & D.*, January 9, p. 25) was approved in the House of Commons on February 9. MR. J. H. HUDSON said that an overhaul of purchase tax was long overdue and new and better proposals should be brought in.

MR. E. G. M. FLETCHER expressed the concern of traders and retailers at the operation of the purchase tax system. Were traders to assume that the changes announced in January would mean permanent reductions in the Budget or would those changes be final? SIR ROBERT BOOTHBY said the changes would not solve the problem of retailers' stocks, because that could never be solved. Purchase tax was pernicious, and both sides of the House too readily accepted it as a sort of integral part of the national life.

Replying, MR. R. A. BUTLER said the big issue that had arisen was the general operation of purchase tax. "There is uncertainty about the future and of the general policy. I was asked by one member to bring the blessing of certainty. I want to say to the House that these representations have made a definite impression on my mind. . . . I want to give the House warning that I may find it necessary to make a very early statement. . . . I have had representations from a great variety of organisations—the retail distributors in particular, and many individual firms, two more of which came in during today. It is obvious that it must now be brought home to people what our intention is in the future so that the minimum of uncertainty can be created. I do not think it is any good in my position letting the House imagine things are easier than they are. . . . This is not the time when large concessions, or, indeed, concessions of any type are likely. I say that so there may be no misunderstanding."

COMING EVENTS

Items for inclusion under this heading should be sent in time to reach the Editor not later than first post on Wednesday of the week of insertion.

Sunday, February 14

JUNIOR BRANCH, MANCHESTER AND SALFORD BRANCH, PHARMACEUTICAL SOCIETY. Ramble to Glossop, Mellor and Marple. Meet at 125 bus stop, Piccadilly, Manchester, at 9.45 a.m.

Monday, February 15

PLYMOUTH BRANCH, PHARMACEUTICAL SOCIETY, lecture theatre, Freedom Fields Hospital, Plymouth, at 7.30 p.m. Mr. A. R. G. Charnings (Ciba Laboratories, Ltd.) on "The Cortisone Story." Film "Modern Drugs in the Making."

ROMFORD BRANCH, PHARMACEUTICAL SOCIETY, Unicorn Hotel, Gidea Park, Essex, at 7.30 p.m., Mr. R. H. Kemp (Secretary, Chemists Federation) on "Some Business Aspects of Pharmacy on Both Sides of the Atlantic."

MICROBIOLOGY GROUP, SOCIETY OF CHEMICAL INDUSTRY, Institution of Structural Engineers, 11 Upper Belgrave Street, London, S.W.1, at 6.15 p.m. Dr. N. J. Borridge on "Inhibitory Substances of Bacterial and other Origins in Milk and Milk Products."

Tuesday, February 16

LEICESTER BRANCH, PHARMACEUTICAL SOCIETY, Boots' café, Gallowtree Gate, Leicester. Dr. A. M. Ward on "Insulin Therapy, Including the New Insulins."

MANCHESTER BRANCH, GUILD OF PUBLIC PHARMACISTS, Grand Hotel, Manchester, at 6.30 p.m. Annual dinner and dance.

WEST MIDDLESEX CHEMISTS' ASSOCIATION and BRANCH, Feathers Hotel, Broadway, Ealing, London, W.5, at 7.45 for 8 p.m. Mr. F. G. Wells (a member of the Pharmaceutical Society's council) on "The New Charter and By-laws of the Society," and Mr. J. Anderson Stewart (secretary, Middlesex Pharmaceutical Committee) on "Recent National Health Service Problems."

AGRICULTURE GROUP, SOCIETY OF CHEMICAL INDUSTRY, chemistry lecture theatre, Royal College of Science, London, S.W.7, at 2.30 p.m. Dr. K. L. Robinson on "Antibiotics in Animal Feeding."

Wednesday, February 17

EXETER BRANCH, PHARMACEUTICAL SOCIETY, Imperial Hotel, Exeter. Annual dinner and dance. Ticket 25s. and further information from Mr. R. H. Trickey, 24 Pamela Road, Exeter.

SOUTHEND-ON-SEA BRANCH, PHARMACEUTICAL SOCIETY, Garon's banqueting hall, High Street, Southend-on-Sea, at 7 p.m. Annual dinner and dance.

WESTERN [London] PHARMACISTS' ASSOCIATION, Bonnington Hotel, Southampton Row, London, W.C.1, at 7.15 for 7.30 p.m. Branch meeting. Dr. J. M. Rowson (curator of the Pharmaceutical Society's museum) on "Some Modern Researches in the Laboratory of the Society."

Friday, February 19

MANCHESTER BRANCH, GUILD OF PUBLIC PHARMACISTS, lecture theatre, St. Mary's Hospital, Whitworth Street, Manchester, at 7.45 p.m. "Any Questions?"

FINE CHEMICALS GROUP, SOCIETY OF CHEMICAL INDUSTRY, chemistry lecture theatre, King's College, Strand, London, W.C.2, at 7 p.m. Reading of original papers by members.

Advance Information

SCHOOL OF PHARMACY, LEICESTER COLLEGE OF TECHNOLOGY, are holding their annual reunion dinner and dance in Leicester on February 24. Ticket 18s. 6d. from the reunion secretary, School of Pharmacy, Leicester College of Technology.

ROMFORD BRANCH, PHARMACEUTICAL SOCIETY, are visiting the Chester Beatty Research Institute in London on March 4. Party limited. Apply for places to Mr. J. D. Mackenzie, 77 Bridge Avenue, Upminster, Essex, by February 19.

NEW COMPANIES

P.C. = Private Company; R.O. = Registered Office

J. BASS (ILFORD), LTD. (P.C.).—Capital £1,000. To carry on the business of chemists, opticians, etc. Director: Joseph Bass, M.P.S. R.O.: 37 Manchester Street, London, W.1.

BOREHAMWOOD PHARMACY, LTD. (P.C.).—Capital £1,000. To carry on the business of manufacturing and general chemists, etc. Directors: Sydney Blum, M.P.S., and A. Bearman. R.O.: 34 Welbeck Street, London, W.1.

WARREN'S (DISPENSERS), LTD. (P.C.).—Capital £5,000. To carry on the business of manufacturing chemists, etc. Directors: Reuben Warren, 220 Bellingham Road, London, S.E.6, Arthur W. Warren and George Warren.

RALLIE HEALTH APPLIANCES (EXPORT), LTD. (P.C.).—Capital £100. To carry on the business of import and export merchants and agents, etc. Directors: Charles S. Phillips and Frederick J. Stening. R.O.: 314 Euston Road, London, N.W.1.

E. W. BOULTON & CO., LTD. (P.C.).—Capital £300. To carry on the business of manufacturers of equipment for the chemical and allied industries, etc. Directors: Ernest W. Boulton and Victor S. Talbot. R.O.: 74 Beechwood Road, Newport, Mon.

INKPEN'S (PHARMACY), LTD. (P.C.).—Capital £1,500. To carry on the business of wholesale and retail dispensing chemists, etc. Directors: Freda M. Inkpen, 181 Church Road, Hove; Leslie H. Dean, M.P.S., and Joyce M. K. Seccombe.

J.K.C. SUPPLIES, LTD. (P.C.).—Registered in Dublin.—Capital £2,000. To carry on the business of manufacturing, wholesale and retail chemists, etc. Directors: Katherine Carty, 5 Mt. Eden Road, Donnybrook, Dublin, and Nicholas J. Cosgrave.

RALLIE HEALTH APPLIANCES (MFG.), LTD. (P.C.).—Capital £2,000. To carry on the business of manufacturers of anatomical, orthopaedic, and surgical appliances, etc. Directors: Charles S. Phillips and Frederick J. Stening. R.O.: 314 Euston Road, London, N.W.1.

JAMES BUSHELL, LTD. (P.C.).—Capital £500. To carry on the business of wholesale and retail dealers in toilet requisites of all kinds, etc. Directors: James Bushell, William Bushell, Elizabeth Filler, Brian H. Lees and Patricia Aspden. R.O.: 19 Delamere Street, Ashton-under-Lyne.

INHALING DRUG & APPARATUS (OVERSEAS) CO., LTD. (P.C.).—Capital £100. To carry on the business of manufacturers and sellers of drugs, medicines, etc. Directors: William E. Collison and Percy L. Binns. R.O.: 87 Eccleston Square, London, S.W.1.

DEL FALLA (COSMETICS), LTD. (P.C.).—Capital £5,000. To carry on the business of manufacturers and dealers in perfumes and essences, soaps and toilet preparations, etc. Directors: Michael A. Ydlibi and Gordon A. Ydlibi. R.O.: 42 Sackville Street, Manchester.

W. H. THOMAS (CHEMISTS), LTD. (P.C.).—Capital £8,000. To acquire the business of a chemist, druggist and photographic dealer formerly carried on at 3 James Street, Cardiff. Directors: Elizabeth M. Evans, Ebenezer D. Evans, William E. R. Evans and Colin M. C. Wade, M.P.S.

Company News

NEVILLE BROWN & CO., LTD.—Messrs. H. T. Smethurst and W. B. Werrell have been elected to the board.

KAYLENE (CHEMICALS), LTD.—The directors state that it has been found impracticable to maintain two trading companies with similar names and therefore the recently-formed company is being wound up. The name of Kaylene, Ltd., is in process of being changed to Kaylene (Chemicals), Ltd., and the old-established business will trade under that name.

NEW PRODUCTS AND PACKS

Glycerin, Lemon and Honey Pastilles.—Meggeson & Co., Ltd., Llewellyn Street, London, S.E.16, announce the introduction of a new glycerin, lemon and honey pastille, complementary to the company's glycerin and blackcurrant pastilles. The new pastilles are available in 2-oz tin.

"Revolutionary" New Face Powder.—Goya, Ltd., 161 New Bond Street, London, W.1, claim for their new "beauty" powder that it will revolutionise the powder market. Blended with emollients, the powder "soothes and glamorises," also staying on the skin longer than ordinary powders.

Nasal Drops.—Camden Chemical Co., Ltd, 61 Gray's Inn Road, London, W.C.1, have introduced a new product Camfiline nasal drops, each fl. oz. of which contains ephedrine hydrochloride, 284 mgm.; sodium camphor-sulphonate, 71 mgm.; sodium dihydrogen citrate, 5.7 mgm.; and chlorbutol, 142 mgm., in aqueous solution. The pack is a ½-fl. oz. bottle with pipette stopper. A feature of the drops is that the pH is designed to lower the abnormally alkaline pH of the nasal secretions during a cold to a normal, slightly acid pH level.

Packed for the Counter.—The show outer of the doz. cartoned 25-gm. tubes of Microban antiseptic cream contain-



ing aminacrine hydrochloride, B.P., 10 per cent., forms an attractive introduction to customers of this new over-the-counter speciality of Evans Medical Supplies, Ltd., Speke, Liverpool, 19.

TRADE NOTES

Stocktaking.—The annual stocktaking of James L. Hatrick & Co. (London), Ltd., 58 Britton Street, London, E.C.1, takes place on February 25 and 26.

Weaning Food.—Bovril brand weaning food is issued in four varieties: Beef and mixed vegetables; beef and tomato; beef and carrot; and beef and spring cabbage. The makers are Bovril, Ltd., Old Street, London, E.C.1.

Van Deliveries in London.—Carnegies of Welwyn, Ltd., Welwyn Garden City, are now making deliveries by their own van in or near the London area of bulk supplies of their products required at less than twenty-four hours' notice.

Stable Polythionate Solution.—In Dermasulf, a "completely acceptable" stable solution of polythionates, The Crookes Laboratories, Ltd., Park Royal, London, N.W.10, offer a preparation for the treatment of all dermatological conditions in which sulphur is known to be of value.



Re-styled.—The pack of Iron-Ox tablets has been re-styled by the makers, Thomas Marns, Ltd., 49 Weston Street, London, S.E.1. Both sizes are shown in their new cartons with a showcard that is available to stockists.

One-week Showroom.—D. Mawdsley & Co., 64 Faulkner Street, Manchester, 1, are holding a showroom at the Imperial Hotel, Blackpool, from Monday to Friday, February 22-26. Pharmacists in the area are invited to inspect there a display of fancy goods, chemists' sundries and seasonal novelties.

Bathing Caps.—A reduction in price is announced by WILLIAM FREEMAN & CO., LTD., Suba-seal Works, Peel Street, Barnsley, in their Suba-seal bathing caps, which are claimed to give a "complete vacuum seal" by reason of the moulded serrations on the internal edges.—Suction cups in the Trident swimming cap of W. W. HAFFENDEN, LTD., Richborough Rubber Works, Sandwich, Kent, are claimed to ensure "real comfort and dry hair."

Press-coated Tablets.—A practical method of press coating evolved by workers in the laboratories of Evans Medical Supplies, Ltd., Speke, Liverpool, 19, is claimed to be the first of its kind. The process, for which the trade mark Prescoted has been coined, consists in applying a suitable coating by compressing it in the dry state on to a ready-formed "core" tablet of the active ingredients. The process is rapid, automatic and anhydrous. Prescoted tablets are no bigger than tablets prepared by the usual pan-coated process and the finish is "pharmaceutically elegant." A special device centres the core tablet in the machine.

Prescoted tablets can be made to disintegrate more readily than tablets prepared by the conventional pan-coating process, since they need not be compressed so hard, nor is a protective coating required for hygroscopic ingredients. Issue of the first tablets made by the Prescoted process is expected to be announced in the near future.

Exhibitions and Fairs.—The thirty-eighth annual exhibition of the PHYSICAL SOCIETY is being held at the Imperial College of Science and Technology, Imperial Institute Road, London, S.W.7, April 8-13.—The FIRST INTERNATIONAL INSTRUMENT CONGRESS AND EXPOSITION is being held in Philadelphia, Pa., U.S.A., September 13-25. The Instrument Society of America, in its capacity of organiser, has invited technical and scientific societies in the United States and elsewhere to take an active part and the Dechema Deutsche Gesellschaft für chemisches Apparatewesen is proposing to organise two scientific journeys to the United States in connection with the event. One journey will last six days; the other will extend over a period of four weeks.—The thirty-sixth LYONS INTERNATIONAL FAIR is being held from April 24 to May 3.—PHOTOKINA 1954 (the international Photo and Cine Exhibition), takes place at Cologne, Germany, April 3-11.—The GERMAN INDUSTRIES FAIR is being held in Hanover, April 25 to May 4. Information about it may be obtained from Schenkers, Ltd., shipping and forwarding agents, 27 Chancery Lane, London, W.C.2 (telephone: Chancery 6612).

Display Card.—The showcard illustrated, prepared for Trufood infant cereal by the manufacturers, Trufood,



Ltd., Green Bank, London, E.1, is printed in green and vivid yellow. It is of convenient size for display on a small counter. Messrs. Trufood are now distributing throughout the United Kingdom the latest addition to their Spoonfoods range of strained and homogenised baby foods: "thick bone broth with beef and vegetables." It is a "chemists only" product.

HORTICULTURAL NOTES

Agencies for Seeds.—Chemists prepared to take up an agency for Bees' seeds on a sale-or-return basis are invited to write for terms to Bees, Ltd., Agency Dept., 28 Mill Street, Liverpool.

Root-forming Hormone.—If the amount of hormone needed to permit cuttings to root is deficient, rooting does not take place. To ensure a satis-



factory rooting system, May & Baker, Ltd., Dagenham, offer Seradix, which contains a compound chemically similar and in action identical to the natural hormone. Seradix A, a liquid, is issued in containers of 25 and 250 c.c. Seradix B root-forming hormone powder is in cartoned bottles of 600 gm. in three distinctively coloured varieties for the treatment of soft, medium and hard cuttings.

High-analysis Fertiliser.—Nipko soluble powder fertiliser, manufactured by Arthur W. Smith (York), Ltd., 4 The Pavement, York, shows on analysis a content of 23 per cent. nitrogen, 18.7 per cent. soluble phosphoric acid and 16.4 per cent. soluble potash. Trade and wholesale inquiries are invited. The product is being nationally advertised.

Pesticidal Products.—The 1954 price list of BATTLE, HAYWARD & BOWER, LTD., Victoria Chemical Works, Lincoln, gives details of DDT, calomel, nicotine and Gammexane dusts in puffer containers, arsenical and non-poisonous weed killers, derris sprays, winter washes, etc. A speciality of the company is "own name" packs for stockists.—Mothdoom liquid spray, stainless and pleasantly perfumed, is available in two popular sizes and in bulk sizes from $\frac{1}{2}$ -gall. upwards. A new bulb sprayer is mounted on a cap ready to fit both 8- and 16-oz. sizes. The makers are DAVID REID, LTD., Reidex House, Abingdon Road, London, W.8.—Arsenical and non-arsenical weed killers, slug bait, ant and worm killers, DDT, derris dust, etc., are among the products offered by TOMLINSON & HAYWARD, LTD., 51 Newland, Lincoln. Chemists are invited to write to the company for trade terms.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN

A NEW PROCEDURE WITH PRESS RELEASES

And a statement on the use of titles

At a meeting of the Council of the Pharmaceutical Society held in London on February 3, the president (Mr. T. Heseltine) in the chair, it was decided that in future material should not be issued by the Society's Press officer until approval had been obtained from the Society's office. The decision followed a recommendation from the Organisation and Public Services Committee arising out of discussion at the previous meeting on what the lay Press had published upon an address made by Mr. F. C. Wilson at a meeting of the Durham Branch (*C. & D.*, January 16, p. 56). After a resolution from the Portsmouth Branch (*C. & D.*, January 23, p. 73) had been considered, it was decided to draw the attention of that Branch to the new policy.

Response to Requests for Advice

The Council also decided, in view of many requests for advice, to issue a statement on the appropriate usage of titles under the new conditions, supplementing a note which it had issued earlier on the legal position. The statement is as follows:—

In the past there has been no uniformity of practice in the use for business purposes of the titles which have so far been available to pharmacists as distinctive titles and it may be that it should be left in future, as in the past, entirely to the discretion of each pharmacist what title or titles he should use even though this means, as it would do, an increase in their variety. On the other hand there is a good deal to be said for at least a reduction in the variety of titles used and "Pharmaceutical Chemist" or "Pharmacist" suggest themselves as the most suitable. There is little to choose between the two.

Before the Pharmacy Act 1898 only pharmaceutical chemists could be Members of the Society, chemists and druggists being admissible only as Associates. The abbreviations "M.P.S." and "A.P.S." by being in conformity with the normal practice of professional bodies served to indicate the professional status as distinct from the legal status of these two classes of qualified persons. Membership of the Society was at the time voluntary and if a Pharmaceutical Chemist did not desire to be a Member he could use the abbreviation "Ph.C." though the meaning of this as indicating status within the profession was not so clear.

After the Pharmacy Act 1898 Membership of the Society became open to chemists and druggists and Associateship ceased. There was however no new status provided for pharmaceutical chemists within the Society to distinguish them from chemists and druggists as Membership had done previously. Consequently "Ph.C." became the only way in which this distinction could be shown in a shortened form.

By the Pharmacy and Poisons Act 1933, all registered persons became Members of the Society and now that the Pharmacy Act 1953 has unified the legal status of pharmacists and a Fellowship of the Society has been created, it is possible for the Society to fall into line with normal professional practice and to adopt a formula which would give a clear indication of status within the profession on the one hand and legal status on the other. This is to use as abbreviations only "M.P.S." and "F.P.S.," "pharmaceutical chemist" being used in full if it is desired to use it as a description of the qualification held. The following comparisons illustrate the formula:—

- — M.P.S. (or F.P.S.),
Pharmaceutical Chemist.
- — M.R.C.V.S. (or F.R.C.V.S.),
Veterinary Surgeon.
- — L.D.S., R.C.S. (or F.D.S., R.C.S.),
Dental Surgeon.

The Council desires to point out that it would deprecate the use of fancy titles such as "pharmaceutical dispensing chemist," "M.P.S.(Lond.)," "prescription specialist" and "leading chemist," and would also draw the attention of members to the relevant paragraph in the Statement upon Matters of Professional Conduct.

A report from the British section of the Franco-British Pharmaceutical Commission, held in London on February 2, gave St. Malo and Dinard as the most suitable places for the 1954 Congress. The inclusive cost per head for those attending would be less than £25. Subject to confirmation from France, arrangements were approved as follows:—(a) Two French lecturers to visit Glasgow, Aberdeen and Dundee, to deal with a scientific, an educational, and a professional subject between them. Dr. D. McCall to be asked to accompany the lecturers in Scotland. (b) The French have selected Paris and Algiers as centres for lectures. It was agreed to ask Professor A. D. Macdonald to give a lecture on a pharmaceutical subject, the president of the Society on a professional subject and one of the lecturers to speak also on pharmaceutical education in Britain.

In response to the Council's suggestion for a grant to a British pharmacist or graduate in pharmacy for post-graduate work in a French University (see *C. & D.*, 1953, II, 349), the French section had stated that the *Ordre National des Pharmaciens de France* had set aside a sum for a scholarship to enable a French pharmacist to do research in a British University in two successive years. The Council agreed to accept the French offer and to award a scholarship of £400 per annum for two years for a British student at a French University.

Hospital Matters

The Co-ordinating Committee of the Society and the Guild of Public Pharmacists reported that the Ministry of Health had drawn attention in *Prescribers' Notes* (October 1953) to the confusion caused by including in certain hospital formularies preparations with the same title as the British Pharmacopœia and National Formulary preparations, but materially different in composition. The Ministry asked that a similar note should be published in the *Public Pharmacist*. The Council agreed to inform Mansfield Branch of the Society that it endorsed the principle of a resolution from that branch calling for efforts to bring hospital pharmacists' salaries more into line with those paid to retail pharmacists and urging pharmacist members of Hospital Management Committees to press their committees to send a resolution on the subject to the Association of Hospital Management Committees; but considered that the procedure suggested would have little effect. The Council also agreed to ask Mansfield Branch to submit specific proposals whose adoption would result in improving the salaries offered to hospital pharmacists.

The provision of an adequate pharmaceutical service, rota services, and their breaking by contractors under the National Health Service were referred to the Liaison Committee with the National Pharmaceutical Union.

The Council decided, as an interim measure, to issue a notice calling attention to recent medical evidence of the relation between pink disease and mercurial teething powders or tablets (*C. & D.*, 1953, II, 590), requesting pharmacists to warn their customers of the dangers and to use the greatest discretion in supplying such preparations. The Council decided to consult with the British Medical Association as to any further desirable measures.

The Benevolent Fund and War Aid Committee's report showed that grants amounting to £209 (plus £35 from the Orphan Fund) had been made to four widows and three members. A recommendation for a grant of £78 in another case was approved and one application was deferred. After correspondence with the National Assistance Board an annuity of £104 per annum was reduced to £27. The

secretary was authorised to pay from the Benevolent Fund the retention fee of £2 2s. due from one member. It was reported that the North Staffordshire Branch had offered to present a set of china for use at Birdsgrove House. A cheque for £5 16s. 6d. was received from the Rhyl Branch and it was agreed to use it towards furnishing one of the rooms. A gift of £12 12s. from the Leicester and Leicestershire Branch was earmarked for similar use. In the month to January 16 there were seven guests at the home for an aggregate of three weeks (ten guests and six and a half weeks in the first month of 1953). Further gifts from guests, in cash and in kind, were reported, as was a legacy of £100 to the Benevolent Fund from the late Mr. John Henry Hart, Ross, Herefords. The chairman of the committee (Mr. T. REID) called attention to a sum of £46 contributed to the Benevolent Fund by the junior branch of the Manchester Pharmaceutical Association.

THE REGISTRAR reported that, by an oversight, the number of members needed to call a special meeting of the Society had not been altered from 100 in the original draft of the new by-laws, though it had been decided to keep to the previous figure of thirty. Pending an alteration in the by-laws that was being made when they were next amended, the Council agreed to call a special meeting if thirty members asked for it.

The vice-president (Mr. E. A. BROCKLEHURST) reported on having presided at an informal dinner given by the Society to a party of Chilean pharmaceutical students and three professors that had been travelling through Europe (see *C. & D.*, January 30, p. 97). The vice-president handed over to the Society's keeping two pennants presented by Professor Eduardo Schalscha-Becker, who was in charge of the visitors. DR. D. McCALL (resident secretary, Scottish Department) reported that he had been present at a dinner given in their honour in Edinburgh and that the Scottish Department also had been presented with a pair of pennants.

It was agreed to accept an invitation from the National Pharmaceutical Union to form a joint *ad hoc* committee to consider the Food and Drugs Amendment Bill.

The Council decided to renew for the 1954 meeting of the British Pharmaceutical Conference its offer of £500 to assist certain applicants to attend.

THE CURATOR reported that he had prepared an exhibit entitled "Pharmaceutical Products employed in the Health Service" for display at a Joint Services Health Exhibition organised by the Bolton Executive Council, January 18. The curator was authorised to accept an invitation from the University of Ghent to deliver two lectures there in March on the biogenesis of tropane alkaloids in *Datura* and allied genera of the Solanaceæ.

The Law Committee stated that, in December 1953, the Society's inspectors and agents had visited 799 authorised sellers, 116 listed sellers and 300 drug-store proprietors and similar traders. Action was taken in five cases of alleged infringements of the Pharmacy Acts.

The Finance Committee recommended, and the Council approved, the action of the secretary in making payments amounting to £4,289 and of the treasurer in paying accounts amounting to £30,757.

Branch Prizes and Grants

On the recommendation of the Organisation and Public Services Committee the Council decided to withdraw the offer of an annual branch prize. In future, the award of a branch prize would be a matter for each branch to decide for itself, the cost being borne by the branch. The Committee considered the formula for determining the branch grant from headquarters. In the previous five years only seven branches had not been considered sufficiently active to qualify for the additional sixpence per member. The Committee recommended, and the Council approved, that the scheme should be abolished, and that an additional threepence per head should be paid annually to all branches, making the basic grant 4s. per member

or student-associate, subject to deduction as hitherto if the balance in hand exceeded 20 per cent. of the basic grant.

THE TREASURER (Mr. W. S. Howells) asked whether a branch might still ask for more if it pleaded that it was more active than other branches. MR. G. H. HUGHES (chairman of the Committee) said that if there should be extreme circumstances meriting a special application it would be considered. THE TREASURER: I hope they will be very extreme, Sir.

THE PRESIDENT had earlier reported with regret the death of Mr. G. A. Tocher (see *C. & D.*, February 6, p. 127). Mr. Tocher's name, he said, would always be associated with the pharmaceutical organisation of London which he did so much to promote, develop and maintain in both its professional and social aspects. The Council remembered with gratitude his work for the Society's branches over many years.

THE REGISTRAR (Mr. F. W. Adams) announced that the following members of Council were retiring in 1954: Messrs. W. Deacon, J. M. Dowty, G. Hincliffe, W. S. Howells, J. F. McNeal, H. T. Thomas and F. C. Wilson.

ECHOES OF THE PAST

JONES'S RHEUMATIC TINCTURE

From *The Morning Chronicle*, April 9, 1795.

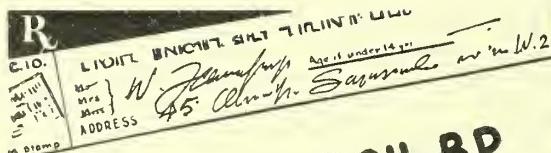
A NEW PREPARATION.—For RHEUMATISMS and the LUMBAGO.

JONES'S RHEUMATIC TINCTURE.—Valuable Discoveries are commonly the effect of accident. The Inventor of this Medicine is a Clergyman of the Church of England, who, during a long series of experiments in Pharmaceutic Chemistry, undertaken partly for his amusement, but principally with a view of assisting the poor in his neighbourhood, had the good fortune to discover a combination, which he had reason to suppose would prove a powerful remedy in all Rheumatic cases. The result has more than answered his expectations; and, from its peculiar efficacy in numberless instances, he has no hesitation in pronouncing this Medicine to be superior to any hitherto used in this excruciating Malady. Of the truth of this he can produce the most unquestionable proofs, not only from men of veracity, who have experienced its wonderful effects, but from some of the most respectable Gentlemen of the Faculty, under whose direction it has been administered, and by whom he has been repeatedly urged to extend its salutary influence beyond the limits of his own neighbourhood. This he has at length consented to, from a full conviction, that his RHEUMATIC TINCTURE will prove a valuable acquisition to Medicine, and a benefit to Mankind.

This Tincture may be mistaken, perhaps, for a variety of the Tincture of Guaiacum; but though Guaiacum enters into the composition, the Inventor solemnly assures the Public, that the ingredient (a Vegetable Production) on which its great efficacy depends, is an article unknown in the Materia Medica, and that this Medicine has often effected a cure, when all the Preparations of Guaiacum have been given in vain. It is equally as serviceable in Chronic as in acute Rheumatisms, and will be found an admirable Remedy for that deep-seated and obstinate complaint the Lumbago.

It is prepared by the Inventor, and sold only at Mr. Newbery's, at the Warehouse for Dr. James's Powders, No. 45, the East end of St. Paul's, London, in bottles, price 3s. each, and 6d. the stamp; but, on taking six, the stamps will be allowed gratis.

ONLY TOO LEGIBLE.—There are once again complaints of the illegible writing of doctors. Not long ago a prescription for a boy with measles was sold at Sotheby's as part of a letter from Shelley to Byron. It changed hands again and again. It was used by a composer as the opening bars of an overture to an opera, quoted as an ancient Etruscan inscription by a professor, presented to a museum as Napoleon's signature, reproduced in an art magazine as a fresco from the banqueting hall of a South German castle, passed as a betting slip in the Strand, and published as a Chinese poem in a highbrow review.—Beachcomber in the *Daily Express*.



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The CHEMIST AND DRUGGIST

For Retailer, Wholesaler and Manufacturer

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TELEGRAMS: "CHEMUS ESTRAND, LONDON"

"Impressed"—but Unyielding

ALL those manufacturers and traders who looked hopefully for some further cuts in purchase tax in this year's Budget have been chilled by what the Chancellor had to say in the House of Commons on February 9. Mr. Butler admitted that he had been "impressed" by the representations made to him by trade organisations. He would consider what had been said and make an early statement if he found the arguments were valid. But he gave the warning that the present was no time for large concessions, or indeed, any concessions. That being so, his action in reducing tax on certain luxury articles in January seems incongruous. It may be that the Chancellor's statement will be given before this copy of THE CHEMIST AND DRUGGIST reaches our readers. Commenting, therefore, in advance, we recognise that there is good reason for the Chancellor to make his intentions known in good time this year, but if it is to become an annual practice to make such announcements in January or early February, the period of uncertainty in which the public and retailers withhold purchasing will still be there but will be moved back two months.

"pharmaceutical chemists"

THE Society's Council has followed up its recent note on the legal aspects of the titles established by the new charter and by-laws with a statement (p. 154) on their "most appropriate" usage. While applauding the benevolent intentions we remain in doubt whether the advice given is entirely satisfying or conclusive.

Within the profession it is sound enough that everyone should be either M.P.S. or F.P.S., member or fellow. Nobody was in any doubt about that and everybody accepts the position as right and proper. What members really wanted to know was whether everyone who had passed the Qualifying examination was now a Ph.C. No, says the Council. If you want to let the public know the nature of your qualification you may describe yourself, after your M.P.S. or F.P.S., as a pharmaceutical chemist, as in paragraph 4 of the statement. As the veterinary surgeon is apt to call himself a Veterinary Surgeon we can't very well stop you, if you wish, from calling yourself a Pharmaceutical Chemist, as in the comparative examples given below paragraph 4. If you are so old-fashioned as to wish to continue to call yourself a pharmacist, as in paragraph 2 of the statement, you may do so, but for ourselves we mention the word

only to forget it. The one thing we will not countenance is that you should call yourself Ph.C. In the name of common sense, why not?

At the head of Appendix 6 of the Regulations Affecting the Examinations of the Pharmaceutical Society and the Curriculum Connected. Therewith there is an ambiguity. The syllabuses are described as being

for the Pharmaceutical Chemist Qualifying examination and (for persons registered as "Apprentice or Student" on or after June 1, 1948) the Chemist and Druggist Qualifying examination.

This might be taken to mean that, for every person registering after June 1, 1948 (and that includes all entrants henceforth), the examination is the Chemist and Druggist Qualifying examination. Nevertheless, we believe it was the intention to make the examination for every entrant the Pharmaceutical Chemist Qualifying examination. Certainly the official lists of examination results are headed, not Chemist and Druggist Qualifying or even Pharmaceutical Chemist and Chemist and Druggist Qualifying, but Pharmaceutical Chemist Qualifying examination. That being so, why should not the successful entrant proudly call himself Pharmaceutical Chemist? Must he with mock modesty always reduce himself to pharmaceutical chemist? And if there are occasions when he considers the words in full are rather a mouthful, why should he not shorten them to ph.c.? And if ph.c., why not Ph.C.? In Northern Ireland, where the pharmacist may call himself either Ph.C. or M.P.S.N.I., no difficulty seems to have arisen and we do not see why it should in this country. The proud Society member may prefer the one and the practical business man, wishing to describe himself in a way that explains itself to his customers, may prefer the other. It is largely a matter of taste and practical convenience, and we believe that in a matter of this kind practical considerations will take precedence over the wishes—of the kind often called "pious"—of the Council.

One Tariff or Two?

THE Comptroller and Auditor General, in his report in the Civil Appropriation Accounts, 1952-53 (p. 145), has singled out the Scottish Drug Tariff for attention and has suggested that a common tariff for Scotland and England should be prepared. His only reason for advocating such a course is that it appears that Scottish chemists are being paid rather more than the 25 per cent. oncost to which they are entitled under the arbitration award of 1951 (*C. & D.*, 1951.I.760). The apparent excess oncost comes about because the rates in the Scottish Drug Tariff bear a closer relation to actual dispensed quantities than they do in the English Tariff. For example, tab. codein. co. are priced at 4d. per doz. in the Scottish Tariff, against 2s. 5½d. per 100 (which works out at 3½d. per doz.) in the English. Chloroform water in the Scottish Tariff costs ½d. per oz. (but that is from the concentrated water) against 1s. 2d. per gall. (which works out at ½d. per 6 oz.) in England. The above differences and others cost the Department of Health for Scotland about £50,000 a year.

The Auditor General is concerned only with the expenditure of public money; that is his function, and it is right that he should exercise it. Our concern is with the quality of the professional service the pharmacist provides to the public. Judging by the exceptional num-

ber of village pharmacies that are closing in Scotland, and by the exhortation of at least one Executive Council to the public to buy its tooth-paste from the chemist if it wants a dispensing service provided locally (see p. 147), the National Health Service would certainly not appear to be subsidising Scottish pharmacy—at any rate in the rural districts.

It is noteworthy that the Department of Health for Scotland does not suggest that Scottish chemists are not entitled to differential treatment in the compilation of their Tariff. Its statement is that it shares the view—expressed in 1948 by a working party on differences in dispensing practices in Scotland and England—that it might be possible to devise a single tariff sufficiently flexible to meet those differences.

Scottish chemists are adamant in their refusal to countenance such a tariff. They fear that any move towards a single tariff would not only threaten their 1951 arbitration settlement, but would undermine also the now established practice of conducting their negotiations on remuneration separately from the contractors in England and Wales.

Not long ago we suggested a modification in the English Drug Tariff as it affected oral penicillin tablets (see *C. & D.*, 1953.II.613). The present hundred rate is too high and encourages bad stock-keeping. That may be taken as evidence that there is a delicate balance in the Drug Tariff. To change any basis without the most careful consideration of all the conditions may have unexpected and undesirable consequences. To attempt to unify the English and Scottish Tariffs might be equally unfruitful of any major economies. That is not to say that there may not be ways in which both Tariffs could be improved, even in the direction in which the Auditor General is especially interested.

Fowl Pest Inconsistencies

THE Ministry of Agriculture has decided to take further measures to control the spread of fowl pest, and has made an Order (p. 147) prohibiting the movement of poultry, except day-old chicks and hatching eggs, into Wales, Cheshire, Derbyshire, Shropshire, Staffordshire, Herefordshire, Warwickshire and Worcestershire from any other part of Great Britain. That so-called "clean area" is to be protected from infection by restricting the movement of poultry from other areas in which there have been more outbreaks of the disease. It seems that representatives of the poultry industry were consulted before the Order was made and it would be of interest to know if the opportunity was taken to draw attention to the unsatisfactory position in respect of the distribution, as between "professional" and domestic poultry-keepers, of substances that are specific for the disease—a position arising out of the restrictions of poisons legislation. In view of the serious depredations of fowl pest, it is most illogical that any obstacle should be put in the way of any poultry-keeper, whatever his category, in fighting the disease. The "professional" and domestic poultry-keepers may occupy adjacent land, but only the one who can show that he needs the sulphonamide for the purpose of his "trade or business" can buy the drug. The other is expected to go to the veterinary surgeon for a prescription, and the average domestic poultry-keeper does not do that. If he loses his hens from fowl pest he buys

some more and does what he can to avoid the trouble in future. Even if he tries to buy one of the sulphonamide solutions that are freely recommended in the specialist Press, he confronts the pharmacist with the dilemma of deciding whether the purchaser does in fact carry on a trade or business in which the poison is required. If, after cross-examining his customer, the pharmacist makes an error of judgment and sells the drug when he should not do so, he commits an offence the evidence of which he carefully records for the inspector to see when next the poisons register is examined. Meanwhile, hundreds of thousands of poultry are destroyed every year in an attempt to check the spread of the disease. Is the work of the Ministry and the poultry industry in this direction hindered by the application of the restrictions of poisons legislation? It is well known that the veterinary profession as a whole is opposed to the idea that the restrictions on the sale of antibiotics for veterinary purposes should be relaxed, and it is not suggested that indiscriminate distribution is desirable. But the fowl pest problem does seem to focus attention on the need for a reconsideration of the position.

Horticulture for Pharmacists

THE pharmacist should have little difficulty, if he so desires, in becoming an authority in his own locality on the use of chemicals as an aid to horticulture. His education provides him with the basic knowledge that is needed in the field of chemistry and botany—or, in the case of the younger pharmacist, biology. There is no reason why the pharmacist should not acquire sufficient knowledge of horticultural chemistry to enable him to address his local horticultural society on occasion or at any rate to make him the obvious source of advice to the public on such matters as the control of garden pests, the use of fertilisers and of weed-killers.

A glance at the inquiries pages of the gardening Press shows that it is the commoner pests met with in the garden that the public wants to know about. It is therefore a *sine qua non* for the horticultural pharmacist that he should be informed about them. An article elsewhere in this issue deals with the subject.

Pharmacists must on occasion be faced with the customer who argues that chemicals in the garden upset the balance of nature. The question is considered dispassionately and authoritatively in an article by an agricultural chemist on another page. Another writer introduces the seed trade, a sensible starting point for the retail pharmacist without a horticultural section, and a useful addition to an established department. A table of fertilisers is provided for quick reference; and a number of formulas is given.

Exporters' Year Book

ARTHUR J. DAY, A.M.I.E.X. (EDITOR). *The Syren & Shipping, Ltd.*, 26 Billiter Street, London, E.C.3. 9½ x 7½ in. Pp. 319 plus diary and appendices xiv. 40s. (including subscription to the *Merchant Shipper* monthly).

IN the thirty-eighth year of publication the book follows the previous pattern of providing information on documents required for international trade. Under each country is set out such matter as area, airports, currency, weights and measures, postal and commercial information. A list of abbreviations with explanations of phrases used in commercial transactions appears in the appendix following the diary section for 1954.

What the supplier of pesticides should know about the commoner

GARDEN PESTS AND DISEASES

By G. A. EMERY, M.A. (THE MURPHY CHEMICAL CO., LTD.)

WHILE many different pests and diseases may be encountered by the amateur, there are a few that are always with us and it is with these that this article deals. Where there is doubt as to the cause of any damage in the garden, it is best to seek the advice of an expert. The bigger insecticide firms have advisory departments to cater for such needs. Where possible specimens should be sent, insects in a small bottle or tin, damaged foliage in waxed paper or in damp blotting paper and greaseproof paper. Posting on Friday or Saturday should be avoided, to reduce the time interval before receipt. Sometimes the trouble is only discernible from the damage; it may be due to an insect that is too small to see; to one that feeds only by night; or to one that feeds below ground. In some cases the use of a lens (magnification X10) may confirm the cause.

The Ubiquitous Aphis

First let us deal with those insects that attack many different plants and for which similar methods of control may be employed. The most common is the ubiquitous aphis (green fly, black fly, or plant louse). Aphides feed on the under-side of leaves or on tender shoots and sometimes, as on lettuces, on the roots. They cause stunting, curling and a sticky exudation of sugar. This often gives rise to a secondary fungus, sooty mould, which appears as a black soot over the surface. While this is unsightly, it does no harm, and disappears when the aphides are destroyed. The most effective treatment is to spray with one of the phosphorus insecticides, such as HETP or TEPP, being careful to spray the under-side of the leaves, adding an extra wetting agent if the leaves are badly curled. Suitable products and recommendations may be obtained from the insecticide manufacturers. The best non-poisonous alternative is a proprietary formulation of lindane. For most purposes a 3 per cent. miscible solution, used at 1 fl. oz. to 2 gall. of water is suitable. Ants tend green fly and carry them from plant to plant. It may often be an advantage, therefore, to sprinkle 0·65 per cent. lindane dust or 5 per cent. DDT dust on the ground to destroy them and prevent reinfestation. Ants also cause direct damage by removing seeds and loosening soil round plants, causing them to dry out. This may sometimes explain the apparent poor germination of small seeds. In flower beds and on lawns the slightly cheaper 5 per cent. BHC dust may be preferred, but it should not be used in the vegetable garden because it causes tainting of potatoes and other root crops. When a miscible lindane spray is being employed to control aphis, it can also be watered on to the soil to destroy ants.

Another pest that can give rise to stickiness of foliage and sooty mould is white fly (Fig. 1), but this insect does not cause leaf-curling. The insect is very small, with snowy white wings, and takes flight when disturbed. It is most common on greenhouse plants but is also found on cabbages. White fly can be controlled by spraying with a lindane preparation or, under glass, by DDT or lindane smokes. Leaves will sometimes be found to have white or yellow spots. They often denote leaf hoppers: narrow-bodied, silvery-yellow insects about $\frac{1}{16}$ in. long, usually taking flight with a jump when disturbed. Spraying with a DDT or a lindane preparation is effective. Pieces eaten out of leaves usually denote some form of caterpillar. Some caterpillars feed by day, and the offending insect may then be found, but many feed only by night, hiding by day in the soil or other shelter. The treatment is the

same, namely spraying with a 20 per cent. wettable DDT, 1 oz. in $2\frac{1}{2}$ gall. of water, or dusting with DDT dust. As DDT is long-lasting, the caterpillars will be killed when they return to feed. A lindane spray gives fair control but DDT is preferable. Damage by slugs and snails is often very similar to that of caterpillars but in this case visible silvery trails are left. Normal insecticides are of no value for these pests; the treatment is to use a bran bait containing 4 per cent. metaldehyde or to spray or water the ground with a liquid preparation of metaldehyde. Slugs cannot stand the heat of the sun and feed by night, hiding by day in rank-growing plants or under stones or soil. Their presence is therefore not always suspected.

Insects that do much damage without being seen include thrips (Fig. 2), minute narrow-bodied insects, barely visible to the naked eye, which suck sap, causing a silvering of the leaves. When they attack flowers, such as carnations, gladioli or roses they also produce one-sided distortion and bleaching of the petals. Fine white pin-pointing of leaves, followed by progressive bronzing and often by premature defoliation, indicates another almost invisible pest: red spider (Fig. 3). Examination of the under-side of the affected leaves with a hand lens will disclose the mites or their spherical, translucent, eggs. Both eggs and mites can vary in colour from very pale greenish yellow through orange to red, according to age. Damage by red spider is most severe in hot, dry conditions, usually in the latter part of the summer. Three species are involved, with differing habits, but all can be controlled in summer by the same methods, i.e. spraying with one of the phosphorus insecticides or with derris extract. Special methods for control of fruit tree red spider are described in the section on apples. Under glass the use of azobenzene smokes is a simple remedy. Where leaves show unusual colour effects or scorching, particularly of a regular pattern, and no apparent cause is visible, a shortage of one or more minerals in the soil may be responsible.

Wilting, poor growth or even death of plants may be the result of insects feeding on the roots. The most important of these is the wireworm (Fig. 4), the hard-skinned, yellow or brown larva of a beetle. This pest attacks the roots of any plant, but is of particular importance to the gardener when it bores into potatoes or carrots. The most effective method of control is to treat the ground with BHC or lindane dust at 1 oz. to the sq. yd. BHC should, however, not be used in the vegetable garden and there is doubt as to the safety of lindane in contact with potatoes. For this crop it is therefore safer to use the slightly less effective DDT dust. Another root feeder is the cockchafer grub (Fig. 5), a large fleshy white grub growing over an inch long, which damages bushes and turf. Also damaging turf is the leather jacket, the grey legless larva of the daddy-long-legs. This grows to about $\frac{3}{4}$ in. long. Both these can be controlled in the same way as wireworm, preferably in the autumn. Millepedes (Fig. 6) cause similar damage and one species also bores into strawberries. They are controlled by DDT or lindane dust. Centipedes (Fig. 6), which are flattened with the legs splayed sideways, do good by eating small insects, and should not be confused with millepedes which are round and have their legs parallel and close together.

Apples and Other Fruit

Missshapen, stunted fruit, curled leaves and sticky foliage are caused by aphis. While summer treatment with lindane spray may be employed, a much better method for fruit trees in general is to destroy the over-wintering eggs by

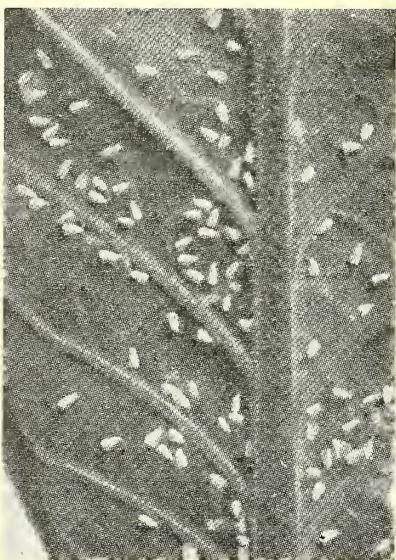


Fig. 1. White fly.

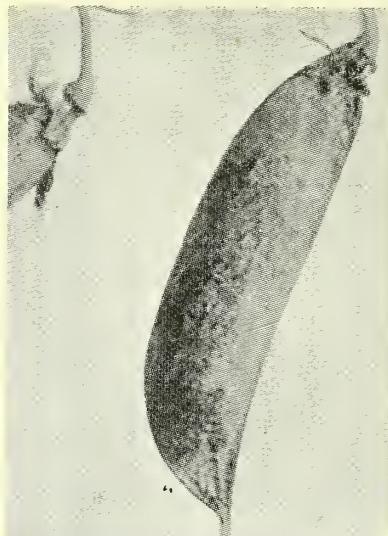


Fig. 2. Peas damaged by thrips.

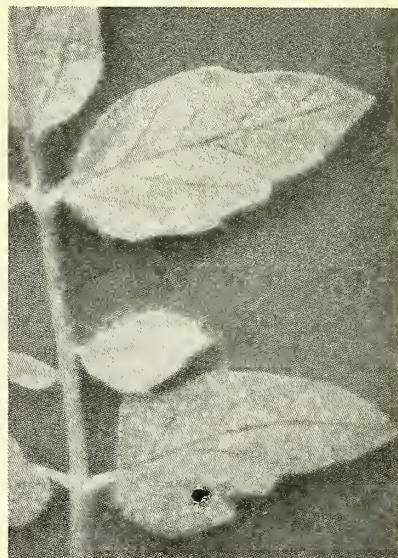
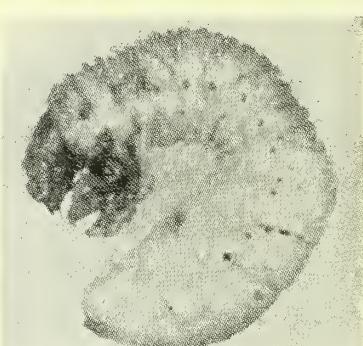
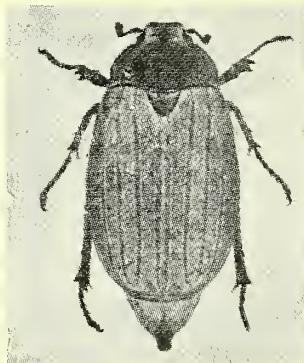
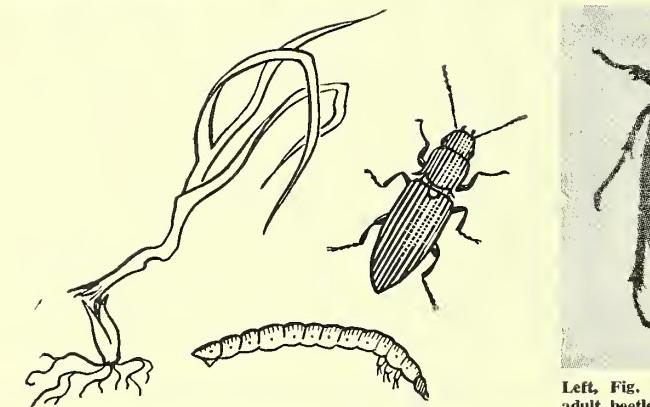
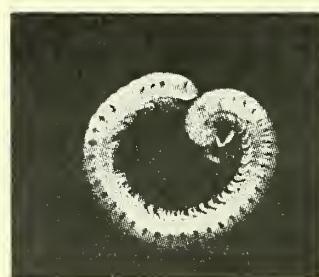


Fig. 3. Red spider damage on tomato leaf.



Left, Fig. 4. Wireworm (the hard-skinned, yellow or brown larva of a beetle), the adult beetle, and a damaged seedling. Above, Fig. 5. Cockchafer and grub (to be in proportion to the adult, the grub that is illustrated should be approximately half the size that it is). Left, Fig. 6. Centipede and millepede. Centipedes are flattened with the legs splayed sideways. They should not be confused with millepedes which are round and have their legs parallel and close together. Millepedes do damage similar to that of the wireworm but centipedes do good by eating small insects.



spraying with a tar oil winter wash at 5 per cent. or with a DNC winter wash at 7½ per cent. The latter also controls red spider, but should not be used on peaches. If tar oil is used at 7½ per cent. to 10 per cent. it is also effective against the eggs of winter moth.

WORMY APPLES. If damage occurs when the fruit is very small, it will be the work of the apple sawfly (Fig. 7); if after the middle of June and up to picking, it will be codlin moth (Fig. 8). The treatment for sawfly is to spray at petal fall with a lindane preparation. For codlin moth, spraying should be done in mid-June and again in the third week of July, with wettable DDT at 2 oz. in 2½ gall. of water. On young trees with smooth bark useful protection can be obtained by tying bands of sacking round the trunks in mid-July and removing and burning them, together with any larvae adhering to the bark, in December. Fruit distorted and with pale brown callouses, but not much reduced in size, first leaves showing purple or brown puncture marks, is caused by apple capsid (Fig. 9). It is easily con-

trolled by spraying with DDT wettable powder at the green or pink bud stage; this treatment will also destroy the caterpillars of the winter moth. Brown, unopened blossoms remaining at petal fall, with inside them a brown legless maggot, indicate attack by apple blossom weevil. A few capped blossoms will not matter but if there are many, spray with wettable DDT at the breaking stage of the buds. Woolly aphid (Fig. 10) causes patches of white wool on trunk or branches of the tree or at the base of the fruit. Damage by this pest may also allow the canker disease to enter. The best treatment is to spray with a lindane preparation at green bud and pink bud, when the insects are migrating up from the roots where they spend the winter. Individual patches may also be treated by painting with undiluted tar oil winter wash. Apple scab (Fig. 11) causes olive green spots on the leaves later turning black, and brown or black corky spots on the fruit. It is only avoided by following a full programme of spraying, usually with lime sulphur; and most amateurs appear content to

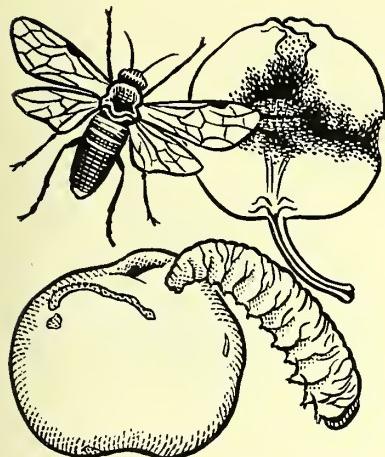


Fig. 7. Apple sawfly.

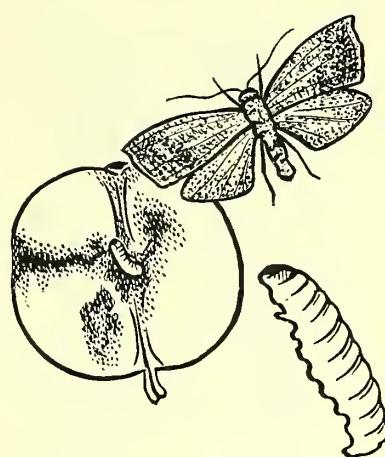


Fig. 8. Codlin moth.



Fig. 10. Woolly aphis.

accept a percentage of scabbed fruit.

PEARS. Aphis and scab are the chief causes of trouble and the same remedies apply as for apples.

PEACHES AND APRICOTS. Aphis should be controlled by tar oil winter wash applied in December and red spider by summer treatment with derris. DNC winter washes should not be used. Leaves curled or cockled, often tinged red, are due to peach leaf curl. Spray with copper fungicide or lime sulphur just as the leaves are falling in autumn and again as the buds are swelling in the spring.

PLUMS AND DAMSONS. Aphis and red spider are dealt with as for apples. Silver leaf fungus gives leaves a silvery appearance. A heavy dressing of sulphate of ammonia sometimes does good, but all infected branches should be cut out and burned before mid-July. Brown rot (Fig. 12) is characterised by rotten fruit covered with white pustules, later drying up and shrivelling. This disease often follows insect damage. Winter spraying with tar oil helps considerably in reducing it. The mummified fruit left hanging on the trees should be removed and burned before the spring.

CURRENTS. Buds swollen and globular instead of pointed, indicate the damage known as big bud (Fig. 13), which is caused by a mite invisible to the naked eye. All swollen buds should be removed and burned before the spring and the bushes sprayed with lime sulphur at 3 per cent. at the time flower trusses have formed but not yet opened. On varieties Goliath, Edina, Victoria, Triple X and Davison Eight, the rate is reduced to 2 per cent.

RASPBERRIES AND LOGANBERRIES. Aphis is controlled as on apples. Small maggots in the fruit are the larvae of the raspberry beetle (Fig. 14). Spray with wettable DDT or



Fig. 9. Above and below. Apple capsid damage to fruit and leaf.

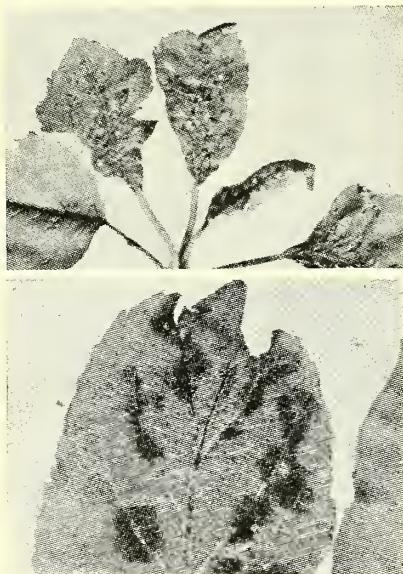


Fig. 11. Above and right. Apple scab on fruit and leaf.

with derris extract two weeks after full bloom and again two weeks later; or dust with derris dust just before the flowers open and two weeks after full bloom.

TOMATOES (under glass). Grey or brown mould on under-side of leaves indicates mildew. Spray with copper fungicide at intervals of ten to fourteen days. Most important pests are red spider and white fly, already described.

TOMATOES (outdoors). Brown, downy spots on leaves and fruit, with fruit going translucent and rotten indicate blight. Spray with copper fungicide after first heavy rain in July and thereafter at two- to three-week intervals.

POTATOES. When leaves and stems turn brown, tubers blacken and rot in store, blight is the cause. The disease is the same as that on tomatoes. Treat in the same way and avoid planting these crops following one another. Tubers riddled with holes have been attacked by wire-worm. Dress soil with DDT dust at 1 oz. per sq. yd. at time of planting.

CABBAGES AND OTHER BRASSICÆ. Leaves eaten by caterpillars. Dust with DDT dust as soon as damage is seen. Cabbage aphis (Fig. 15) is particularly troublesome in Brussels sprouts and cauliflowers. For effective control, treatment must be carried out early and thoroughly while the pest is still confined to the outer leaves, as once it has entered the hearts or buttons nothing can be done. Spray with a lindane preparation with added wetting agent paying particular attention to the under-sides of the leaves. If young plants wilt after setting out, and roots are eaten, cabbage root fly is the cause. Water with lindane or apply lindane dust after setting out.

TURNIPS, RADISHES AND CABBAGE SEEDLINGS. Leaves punctured with small holes by small shiny black beetles



Fig. 12. Brown rot mummified plums. Dried up and shrivelled stage.



Fig. 13. Black currant buds, normal and affected by big bud.

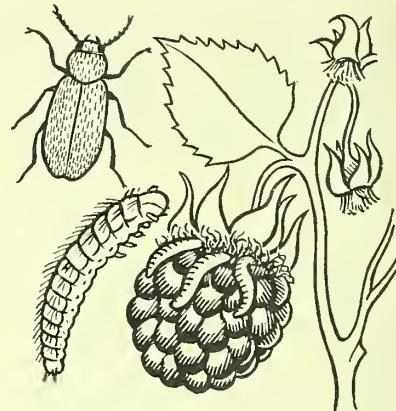


Fig. 14. Raspberry beetle.

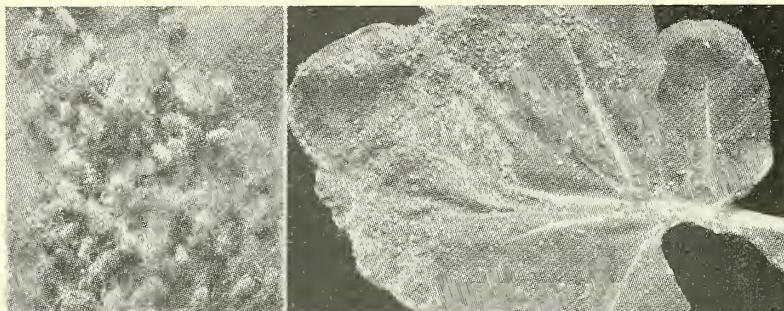


Fig. 15. Colonies of cabbage aphis on leaf.

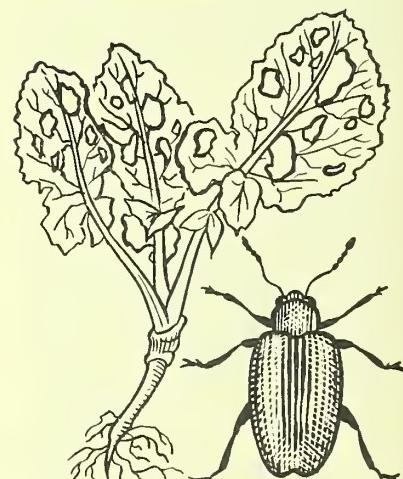


Fig. 16. Flea beetle and damage.

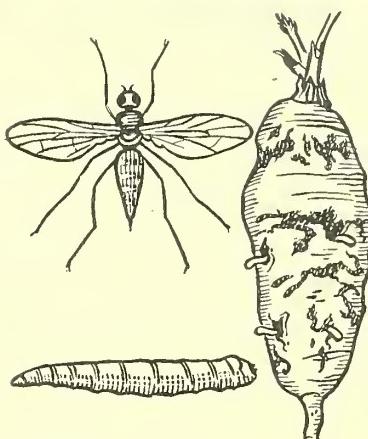


Fig. 17. Carrot fly.

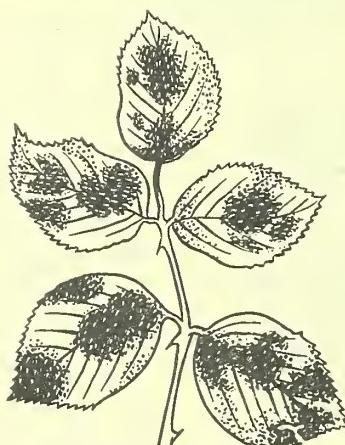


Fig. 18. Rose, black spot.

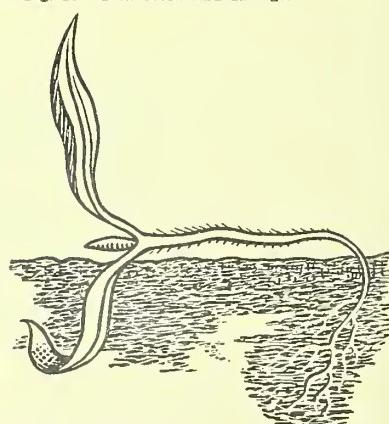


Fig. 19. Damping off.

which jump very actively when disturbed. The insects are flea beetles (Fig. 16). Dust with DDT dust or with lindane dust as soon as seedlings come through and repeat as necessary, or treat seed with lindane seed dressing.

CARROTS. Roots perforated by yellowish-white maggots have been attacked by carrot fly (Fig. 17). Treat seed with 50 per cent. lindane seed dressing or dust along the rows with lindane dust. As carrots may also be attacked by wireworm it is best to check which it is.

ROSES. The common pests are aphis and leaf hopper, already described, while roots are sometimes damaged by cockchafer grubs. They can be destroyed by distributing 1 oz. lindane dust per sq. yd. and raking well in. If buds wilt before opening, and black blotches appear on stems and leaves, black spot (Fig. 18) is the disease. Spray with

copper fungicide at intervals of two weeks. Mildew appears as white powdery mould on young shoots and leaves. This disease, which is most prevalent on ramblers, is treated in the same way as black spot, or by spraying with lime sulphur.

GLADIOLI AND CARNATIONS. Bleached streaks on flowers are due to thrips (described above). If the leaves are brown with appearance of red dust on surface, red spider is the cause. Spray with derris extract.

SEEDLINGS. When young seedlings wither at soil level and fall over, the trouble is known as damping off (Fig. 19), and is caused by one of several fungi that may be either in the water or soil, if this has not been sterilised. It can be prevented by using very dilute copper fungicide for the first watering after sowing.

An agricultural chemist's views on CROP PROTECTION and the Balance of Nature

BY DR. E. HOLMES, M.Sc., F.R.I.C.

(PLANT PROTECTION, LTD., RESEARCH STATION, FERNHURST, NR. HASLEMERE, SURREY)

MANY pharmacists have horticultural departments. Some cater for the commercial grower and the general farmer; many more provide horticultural requisites for the ordinary gardener. All must from time to time be asked what effect the use of insecticides, fungicides and weed-killers is likely to have on what is called the balance of nature. Equally they must from time to time have read the alarmist pronouncements of what the scientist is inclined to regard as the "muck and mystery" school of thought. Now the plain fact is that many of the so-called theories underlying these pronouncements are of the kind that can neither be proved nor disproved by any valid evidence. It is important, therefore, to consider the subject in proper perspective and in the light of the results of properly replicated scientific experiments carried out at the many agricultural research stations up and down the land.

I propose to treat the subject under the following heads:—The need for crop protection chemicals, the evidence for their beneficial effects on crop production generally, the search for safer chemicals in this field, and then, perhaps unwisely, a few of the allegations against chemicals in agriculture. We have been told, almost *ad nauseam*, that the increase in world food production is not keeping pace with the increase in world population and that even if there are surpluses in some areas there are greater deficiencies elsewhere. It has to be admitted that Malthus said the same thing in the nineteenth century; he predicted extreme famine and was proved wrong by the introduction of hugely increased quantities of fertilisers, particularly synthetic nitrogen. But it is now evident that neither fertilisers alone nor other adjuncts, including mechanical aids, to better cultivation will be sufficient in the future, and larger areas of cultivable land are just not available.

Destruction by Pests

It must be obvious that even if all these aids are used to a much greater extent than hitherto, they will be largely wasted if the resulting crops are eaten by insect pests, damaged by fungi or have to compete with large populations of weeds. It is true that some insects and fungi can be destroyed by cultural methods, or avoided by planting resistant varieties of crop plant, varying sowing dates and so on, but these measures only touch the fringe of the problem. It is also true that many weed problems can be solved by hand-pulling and mechanical hoeing, but adequate labour is now no longer available for this to be done on the requisite scale. Better cultural methods will be found, more resistant species of plant will be bred, more

useful parasites and predators will be liberated against pests; but every responsible agricultural worker has come to the conclusion that, in the present state of agriculture and knowledge of it, carefully chosen chemicals not only in the fertiliser but also in the crop-protection field must be employed if we are to harvest maximum yields of food and industrial crops.

Benefits from Chemicals

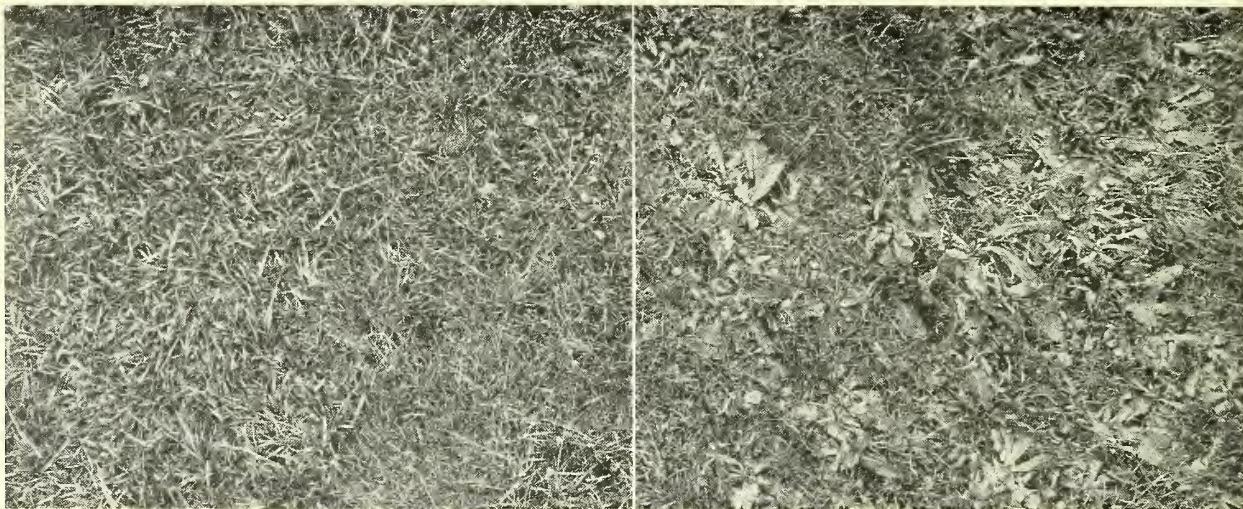
May I now instance a few of the beneficial results of using crop-protection chemicals. The ordinary wireworm had been a scourge of cereal production for many centuries before any chemical other than farmyard manure was used in agriculture. If a really good means of control had been available in the 1939-45 war then the production of cereals on the large areas of newly ploughed pasture would have been increased by at least 10 per cent. Today, as a result of the wartime discovery in Britain of the outstanding insecticidal properties of BHC, and particularly of γ BHC, wireworms need no longer menace our crops. Not only are broadcast dust treatments available but techniques of seed dressing, made possible by the separation of γ BHC, have greatly cheapened the protection of cereal seedlings from wireworm damage. Only on potatoes is the problem not entirely solved, and here the newer chlorinated insecticide, aldrin, shows considerable promise. Many varieties of apples free from disfiguring scab would be impossible without the application of fungicides based on sulphur, copper and now the organic sulphurs. Fungicidal seed dressings are today used on more than 75 per cent. of the seed for Britain's cereal crops and almost certainly add 6 or 7 per cent. to the nation's granary.

With weed-killers the story is similar and even more exciting from a production point of view. Competent research workers, including Professor Blackman at Oxford and Dr. Templeman at Jealott's Hill, have produced field evidence to prove that the application of the so-called hormone weed-killers to cereals fairly heavily infested with a wide range of weeds results in yield increases in excess of 20 per cent.

Now I turn to the problem of finding safer chemicals. A great number of the products now used, including DDT and BHC, the fungicides lime-sulphur and the "educated" sulphurs such as thiram and zineb, the weed-killers MCPA and 2, 4-D, when used as directed, are not only extremely safe to the folk handling them but have very few—and minor—ill-effects on plant and soil organisms other than those they are desired to kill. It is unfortunate that among the efficient products available today the phosphorus in-



Left, sprayed potatoes; right, potato blight on plot of potatoes.



Left, sprayed lawn; right, weed catsear in lawn.

secticides, the mercury fungicides and the di-nitro- weed-killers are dangerous to man and domestic animals and to some beneficial organisms.

Manufacturers do not sell these more dangerous products with great glee, as is sometimes alleged, but take great pains to ensure that they are handled in the safest possible manner. Furthermore, many manufacturers are spending hundreds of thousands of pounds sterling, annually, in efforts to discover safer, more selective chemicals to replace the more hazardous ones now in use. Unfortunately, fundamental scientific knowledge of the relationship between chemical constitution and biological activity is still so slight that methods of search for new products are still, of necessity, largely empirical.

Now I must turn to the most controversial part of this subject. It is alleged that some of these chemicals have increased the incidence of insects and fungi; that some

pests were not known before the use of chemicals; in fact that the chemist has upset the balance of nature. In refutation it must be pointed out that Gilbert White in "The Natural History of Selborne," dated 1789, referred to turnip fly "that infests turnips and many crops in the garden (destroying often whole fields while in their seedling leaves) . . ." Again in very early books on gardening, patches of the scab fungus are shown as characteristic of some varieties of apples. The Irish potato famine of the 1840's was caused by severe outbreaks of a fungus disease, potato blight. All these things happened long before any chemical, not excepting the mineral fertiliser, was applied to any crop anywhere.

It is true that the continued use of badly balanced N:P:K fertiliser mixtures has had deleterious results on some crops; that the wrong use of DDT and some other insecticides has led to increases in numbers of pests other than those the grower set out to kill; and that the continued use of one type of weed-killer has left room for non-susceptible weeds to multiply. But these examples are not indictments of chemicals as such, only of their unintelligent use or of inadequate knowledge. It is sometimes said that the use of all these chemicals is killing the earthworms so beneficial to our soils. That is not true. Manufacturers are still seeking efficient worm-killers for use on lawns and cultivated turf generally. If any of the newer chemicals were efficient for the purpose they would be developed and sold for it. Nothing of this kind has happened yet.

Some folk subscribing to the "grow natural" brand of agriculture point out that more and more of these chemicals seem to be needed as time goes on, and draw the conclusion that they are, therefore, no good or worse than useless. More and more chemicals are being used; but this is because more and more food and industrial crops are required; because the public is demanding produce freer from insect damage and fungus blemishes; because there is a greater awareness of the cause of damage to crops that was formerly assumed to be incurable; and it is attributable also to the increased amount of research being devoted to discovering better chemical tools for this control work.

The root of the matter is that, in the struggle to obtain more agricultural and horticultural production all over the world, farmers have themselves upset the original balance of nature — by growing large areas of a single crop, and other factors of that nature. The intelligent use of chemical aids seeks to restore the balance in favour of the crop. Furthermore, there is no scientific verification whatever for the allegation that the proper use of these aids has lowered the dietetic value of food crops.

Finally, I cannot too strongly stress the fact that nobody claims that these chemicals are substitutes for good husbandry. They are adjuncts to it.



Left, protected cabbages; right, remains of cabbages attacked by flea beetle.

Pharmacists have strong claims to a place in THE SEED TRADE

By H. M. HIRST, M.P.S.

"WANTED—High Class Shops for Resale of X's Renowned Seeds—On Sale or Return—You Pay Only for What You Sell."

THIS advertisement is to be seen in provincial papers—does it interest you, reader? Are there any pitfalls to be avoided? Is it in keeping ethically for a pharmacist to retail seeds? As one whose business has had a horticultural department for many years, perhaps my reflections and hints may satisfy inquirers.

No Living from Seeds Alone

Very few retailers in any trade can make a living from selling seeds only; it has been found necessary to link sales with other horticultural lines. For example, ironmongers sell spades, watering cans and bamboo canes; packeted seeds may be seen at florists and greengrocers; and the "multiples" all sell branded seed packets. On reflection it can be argued that pharmacists have the strongest claim in the retailing of seeds for two reasons. First, they are the only traders who have had to pass an examination in botany, including the structure and germination of seeds; secondly, they are the only persons by law to have the right to retail all poisonous chemicals, including those, such as nicotine, arsenic and corrosive sublimate, that may in some forms be sold by "listed" sellers. Furthermore, they stock many chemicals such as permanganate of potash, calomel powder, etc., that are rarely found in other shops.

It all depends on location whether there will be any great demand for seeds, the best situations being small country market towns, new housing estates in suburban districts, or in the centre of large cities where clerks and business people wander around shop gazing after taking lunch, returning home to their suburban dormitory abodes for the night or week-end. Seeds will not be asked for unless they are on show, and when one gets a prospective customer into the pharmacy, increased sales can be made if the seller is a keen gardener or has knowledge of suitable packets to sell, such as annuals, biennials or perennials, according to the correct sowing time. Possessors of newly-built houses are usually buyers of grass seed which can be a very profitable sideline. If it is decided to sell seeds, then the question arises where to obtain supplies, for horticultural wholesalers are not keen to supply except to *bona-fide* seedsmen or market gardeners. Fortunately, several firms of national repute specialise in agencies for packeted seeds. Some will grant agencies only in unrepresented localities, and a beginner is advised to write to such firms to inquire if the pharmacy address is one which is open for a national firm's specialities. A pharmacist need not be deterred if he finds that the agency for a particular brand of seed is already allotted in his neighbourhood for there are firms which prefer to make use of as many suitable retail outlets as possible. If a favourable reply is received a beginner is advised to take a standard collection of flower and vegetable seeds, value, say, £7 10s. to £10, and retailing at fourpence and sixpence for flower and small vegetable seeds, together with packets of peas and beans at one shilling.

The discount allowed is from 25 to 33½ per cent., and repeat orders may be sent as required provided the value is not under 5s. or 10s. Stands, booklets and advertising material are included, the first named being on loan. When the sowing season is over the firms will send a reminder that all unsold seeds must be returned. There is no loss—no dead stock, and the season's sales are paid for. The

only carriage incurred is on the return of unsold packets. When one has an established connection, and if records are kept of sales, then it is possible to buy packeted seeds outright at a discount of 40 to 50 per cent. In such cases, any seeds left over at the end of a season must be destroyed to preserve the national reputation of high class firms of only supplying new seeds. It is an interesting and clean trade, but needs enthusiasm to be a success.

I have not mentioned the various side lines such as fertilisers, insecticides and fungicides, together with small sundries such as plant labels and twines, but many of the drug houses supplying proprietaries stock such goods. Cultivate the acquaintance of gardeners by joining a horticultural association, and if possible always keep a vase of flowers in season on show, and the result will give regular additions to the till with profitable results to the yearly balance sheet. If the pharmacy is one with an agricultural connection with farmers, then often is it possible to sell farm seeds in quantities of 7 or 14 lb., but competition there is keen with travellers calling direct on farmers, and only experienced traders can hope for big results.

Trade in bulbs such as tulips, daffodils and gladioli could be added to a chemists' horticultural department, but much caution is necessary, for any unsold stock would have to be planted in the chemist's own garden to brighten the house or pharmacy in the late winter or spring months, otherwise they would be a dead loss.

A DISPLAY OF FERTILISERS



In running a horticultural department a display window is a valuable, almost an essential element. It can be put to good use throughout the year. The display of fertilisers illustrated above was put in about this time last year by Mr. W. O. Ayers, Nottingham.

CHEMICAL FERTILISERS

A Guide to their Use

For soil fertility a high proportion of organic matter is essential. It is necessary, however, to supplement organic manures with chemical fertilisers and the following table is intended only as a guide to the quantities and types of chemicals required. It is advisable to warn customers against the dangers that may be involved in the mixing of chemicals together.

1. GENERAL

FERTILISER	CROP	TYPE OF SOIL	WHEN TO APPLY	AMOUNT PER SQ. YD.
AMMONIUM NITRATE ...	Fruit and vegetables ...	Any	Growing season ...	2 oz.
AMMONIUM PHOSPHATE ...	Cabbage, cucumbers, etc.	Clay or chalk. Never in soil deficient in lime	Spring or early summer ...	1 oz.
SULPHATE OF AMMONIA ...				
BASIC SLAG	Slow-growing plants ...	Heavy or light (never in chalk or sand)	Autumn Spring	8 oz.
BONE MEAL	Lawns, fruit, shrubs and herbaceous plants ...	Light	Autumn	2½ oz.
NITRATE OF POTASH ...	All plants	Any	Spring	1 oz.
NITRATE OF SODA ...	For leaf growth in cold weather or after attack by insect pests ...	Light and dry ...	Spring or early summer	½ oz.
MURIATE OF POTASH ...	Fruit and vegetables ...	Light or medium ...	Spring or early summer	1½ oz.
PHOSPHATE OF POTASH ...	Flowers and vegetables and fruit under glass	Light	Spring or early summer	1 oz.
SULPHATE OF POTASH ...	All flowers, asparagus, carrots, cauliflowers and potatoes ...	Light or heavy ...	Spring or early summer	¾ oz.
SUPERPHOSPHATE OF LIME		Medium or light ... (never where lime deficient)	Autumn (medium) ...	2½ oz.

2. FRUIT

SUPERPHOSPHATE OF LIME and	Apple	...	...	...		After pruning	...	...	1 oz.
NITRATE OF SODA	...					When fruit set	...	...	$\frac{1}{3}$ oz.
BONE MEAL and	Apricot	...	...	...		Winter	...	...	1 lb. per tree.
NITRATE OF SODA	...					When fruit set	...	...	5 oz. per tree.
SULPHATE OF POTASH and	Cherry	...	...	...		Winter	...	...	$\frac{1}{2}$ oz.
SULPHATE OF LIME and						Winter	...	...	$1\frac{1}{3}$ oz.
NITRATE OF SODA	...					When fruit set	...	...	$\frac{1}{2}$ oz. .
SULPHATE OF AMMONIA	Cucumber	...	...			Spring	...	...	1 oz.
SULPHATE OF AMMONIA	Currant and gooseberry					May	...	...	1 oz.
and BASIC SLAG	...	...				Autumn triennially	...	...	4 oz.
SUPERPHOSPHATE and	Medlar	...	...	...		After pruning	...	...	1 oz.
NITRATE OF SODA	...					When fruit set	...	...	$\frac{1}{3}$ oz.
BONE MEAL and	Peaches and								1 lb. per tree.
NITRATE OF SODA	...								5 oz. per tree.
BASIC SLAG and	Pear and Quince	...							$\frac{4}{5}$ oz. } per sq. yd. of
KAINIT	...	...							1 oz. } area covered
									by roots.
SUPERPHOSPHATE OF LIME and									$2\frac{1}{2}$ oz. } per sq. yd. of
SULPHATE OF AMMONIA									1 oz. } area covered
BONE MEAL	...	Plum and Damson	...						by roots.
NITRATE OF SODA	...					After pruning	...	...	1 oz.
NITRATE OF SODA	...	Raspberry	...	...		Spring	...	...	$\frac{2}{3}$ oz.
SUPERPHOSPHATE OF LIME						Half in March	...	...	$\frac{2}{3}$ oz.
COMMON SALT	...					Half in June	...	...	$\frac{2}{3}$ oz.
KAINIT	...								$1\frac{1}{3}$ oz.
NITRATE OF SODA	...	Strawberry	...	...					$\frac{1}{2}$ oz.
NITRATE OF POTASH	...	Tomato	...	...		May	...	...	1 oz.
						At intervals throughout			
						the growing season	...		

3. LAWNS

FERTILISER	CROP	TYPE OF SOIL	WHEN TO APPLY	AMOUNT PER SQ. YD.
NITRATE OF SODA ...	Scorched grass ...	Heavy ...	March ...	½ oz.
SULPHATE OF POTASH ...	Poor and weak grass ...	Light ...	March ...	1 oz.
BONE MEAL or equal parts of BONE MEAL and SUPER-PHOSPHATE OF LIME ...	Poor and weak grass ...	Heavy ...	October or February ...	2 oz.
SLAKED LIME (FRESH) or PULVERISED CHALK ...	Poor and weak grass ...	Damp and sour	November or December	10 oz.
CLEAN SHARP SAND ...	Rank coarse grass ...	Heavy ...	Early February	Dressing ½ in. thick

Basic slag should not be used on lawns; it encourages clover, which nitrate of soda discourages.

4. VEGETABLES

BASIC SLAG OR SUPERPHOSPHATE OF LIME	Beans ...	Light ...	Autumn or winter ...	1 oz.
SULPHATE OF MURIATE OF POTASH ...		Heavy ...	When crop maturing ...	1½ oz.
SULPHATE OF AMMONIA or NITRATE OF SODA ...	Beetroot ...		When sowing ...	⅔ oz.
POTASH SALTS ...			Spring when sowing ...	⅔ oz.
STEAMED BONE FLOUR ...	Cabbage family ...		Spring when sowing ...	1 oz.
NITRATE OF LIME ...		Heavy ...	When growing ...	1 oz.
SULPHATE OF POTASH ...			When growing (as top dressing) ...	½ oz.
NITRATE OF SODA ...		Light ...	Early spring ...	⅓ oz.
SULPHATE OF AMMONIA or NITRATE OF SODA ...	Carrots ...		When growing (as top dressing) ...	½ oz.
BONE MEAL ...		Light ...	Spring when sowing ...	⅔ oz.
KAINIT ...			Spring when sowing ...	1½ oz.
SULPHATE OF POTASH ...		Heavy ...	Spring or autumn, according to soil	1 oz.
SULPHATE OF AMMONIA ... Celery ...			Early in Spring ...	⅓ oz.
POTASH SALTS ...			When sowing ...	½ oz.
SULPHATE OF AMMONIA ... Leeks ...			When growth starts ...	½ oz.
POTASH SALTS ...			When sowing ...	½ oz.
STEAMED BONE FLOUR ...			When growth starts ...	½ oz.
SUPERPHOSPHATE ...			When growing ...	1 oz.
SULPHATE OF AMMONIA ... Onions ...		Light ...	When sowing ...	2 oz.
SUPERPHOSPHATE ...			When sowing ...	½ oz.
KAINIT ...			When sowing ...	1½ oz.
SULPHATE OF POTASH ... (As for beetroot)	Parsnips ...	Heavy ...	Early in Spring ...	⅓ oz.
BASIC SLAG ...	Peas ...	Light ...	Autumn and winter ...	1 oz.
POTASH SALTS ...			Spring when sowing ...	⅔ oz.
NITRATE OF SODA ...		Heavy ...	When growing ...	½ oz.
SUPERPHOSPHATE OF LIME			When crop maturing ...	⅔ oz.
SULPHATE OF AMMONIA ... Potatoes ...			When planting ...	½ oz.
BASIC SLAG ...		Light ...	Autumn or winter ...	1 oz.
POTASH SALTS ...			When preparing soil ...	½ oz.
SUPERPHOSPHATE OF LIME		Heavy ...	When crop maturing ...	⅔ oz.
SULPHATE OF AMMONIA ... Spinach ... or		Heavy ...	When sowing ...	½ oz.
NITRATE OF SODA ...		Light ...	When growing ...	½ oz.
SUPERPHOSPHATE ...			Before harrowing ...	1 oz.
SULPHATE OF POTASH ...			Before harrowing ...	½ oz.
SULPHATE OF AMMONIA ... Swedes ... or			When sowing ...	⅔ oz.
NITRATE OF SODA ...			When sowing ...	⅔ oz.
SUPERPHOSPHATE ...			When sowing ...	½ oz.
MURIATE OF POTASH ...			When sowing ...	2 oz.
SULPHATE OF AMMONIA ... Turnips ...			Autumn or spring, according to soil	½ oz.
KAINIT ...		Light ...	When growth begins ...	1 oz.
STEAMED BONE FLOUR ...				1 oz.
SUPERPHOSPHATE OF LIME		Heavy ...	When crop maturing ...	⅔ oz.

HORTICULTURAL FORMULAS

Lime Sulphur

Slaked lime ... 5 gall.
Flowers of sulphur ... 5 lb.
Boil and stir up well; add 25 gall. of water.

The mixture should be sprayed on foliage during the summer against apple sucker, woolly aphis, flower beetles, black beetles, and blister mite, scab, mildew, brown rot and scale.

Carbolic Emulsion

Liquefied phenol ... 10 oz.
Hard soap ... $\frac{1}{2}$ lb.
Water ... $\frac{1}{2}$ gall.

The soap is dissolved, the acid added and the mixture boiled with constant stirring. Use one part to twenty-five parts of water. For control of apple sucker, diamond-backed moth, onion, carrot, and cabbage rootfly, cel-worms and all fungi.

Naphthalene Emulsion

Paraffin (kerosene) ... $\frac{1}{2}$ gall.
Naphthalene ... $\frac{1}{2}$ lb.
Soft soap ... 1 lb.

The naphthalene is crushed and dissolved in the paraffin. The soft soap is boiled in a water bath and the other ingredients stirred in. The jelly thus formed is diluted with fifty parts of water. Used against turnip fleas, leatherjackets, bean and pea weevils, cabbage moth larvae, and eelworms.

Quassia Emulsion

Quassia chips ... 1 lb.
Soft soap ... $\frac{1}{2}$ lb.
Water ... 8 gall.

Steep and simmer the chips for twelve hours. Melt and add the soft soap and dilute to strength required. Used to control green and black fly, red spider, hop and woolly aphis.

Petroleum Emulsion

Paraffin (kerosene) ... 1 gall.
Distilled water ... $\frac{1}{2}$ gall.
Soft soap ... $\frac{1}{2}$ lb.

Soap and water boiled and added to paraffin and mixed. Dilute to 12 gall. Used against turnip fleas, apple suckers, onion and carrot flies, mussel scale, bean and asparagus weevils and beetles.

Liver of Sulphur

Potassium sulphide ... 2 oz.
Water to ... 6 gall.
Soft soap ... 4 oz.

Used against red spider, woolly aphis, eelworm, bean canker, vine and gooseberry mildew, cucumber and melon-leaf blotch.

Soda Resin Wash

Sodium hydroxide ... 1 oz.
Powdered resin ... 8 oz.
Water ... 20 fl. oz.

Boil gently and stir well. 1 to 2 gall. of water is then added according to strength required. Used as a spring wash against oyster, mussel and brown currant scale, woolly aphis and mealy bug.

Lead Arsenate

Sodium arsenate ... 1 oz.
Lead acetate ... $2\frac{1}{2}$ oz.
Distilled water ... 14 gall.

Dissolve and add 1½-lb. black treacle. Used against winter, lackey, tortrix and codlin moths and all fruit tree caterpillars.

Weed-killer for Daisies

Ammonium sulphate ... 3 parts
Ferrous sulphate ... 1 part
Fine sharp sand ... 30 parts

Lime Wash

6 lb. quicklime is slaked with a little water and diluted to 5 gall. It is applied to the trunks of fruit trees just before the bloom opens, against aphides, lichens and mosses on tree trunks.

Moss Destroyer

¼ oz. of ferrous sulphate mixed with twenty times its bulk of sand should be well raked into the surface in October. Rake out all dead moss ten days after application.

Cheshunt Compound

Used against stem-rot fungus and other diseases: the following is a standard formula:—

Ammonium carbonate (fresh) 11 parts
Copper sulphate ... 2 parts

Crush to a fine powder, mix and store in a tightly corked glass or stone jar for twenty-four hours. 1 oz. of the mixture should be dissolved in warm water and added to 2 gall. of water. Iron, tin or zinc vessels must not be used.

PRINT AND PUBLICITY

Advertising Campaigns

COUNTY PERFUMERY CO., LTD., Honeypot Lane, Stanmore, Middlesex: Hiltone. In national Press and women's magazines.

O. SCRUTON & CO., LTD., York: Nurse Harvey's baby powder. In women's magazines.

SMITH & NEPHEW, LTD., Tewin Road, Welwyn Garden City, Herts: Nivea Creme. In women's magazines, nursing and medical journals and general interest magazines such as *John Bull*, "Spot" announcement on Radio Luxembourg on February 24 for sampling purposes.

WHITE-HUDSON & CO., LTD., Southport, Lancs: "Hacks." In leading national and provincial Press.

Booklets and Leaflets

BRITISH SCHERINO, LTD., 229 Kensington High Street, London, W.8: "Are You Getting your Share of this Oblivion Business?" Pp. 4.

CHILEAN IODINE EDUCATION BUREAU, Stone House, Bishopsgate, London, E.C.2: Supplement to "Iodine Pharmaceuticals." Pp. 4. Contains nearly 100 addenda.

H. R. NAPP, LTD., 3 Clements Inn, London, W.C.2: "Primolax" (4-p. leaflet).

SANDOZ PRODUCTS, LTD., 134 Wigmore Street, London, W.1: "The Treatment of Peripheral Vascular Disease with Hydergine" (8-p. booklet); "The Treatment of Hypertensive and Peripheral Vascular Diseases with Hydergine" (29-p. booklet); "The Treatment of Hypertension with Hydergine" (4-p. leaflet); "Digest of Clinical Publications on Hydergine" (12-p. booklet).

Show Material

THE DISTILLERS CO. (BIOCHEMICALS), LTD., Fleming Road, Speke, Liverpool, 19: "Distaste Penicillin Supplement." Showcard 9½ x 8 in.

PHILIPS ELECTRICAL, LTD., Century House, Shaftesbury Avenue, London, W.C.2: Philips dry shaver showcard, 13½ x 13½ x 5 in. in three colours.

BAYER PRODUCTS, LTD., Africa House, Kingsway, London, W.C.2: Display card for Roccal disinfectant for "nappy rash." Weight-cards. HODGES & MOSS, LTD., 6 Castle Gates, Shrewsbury: Showcards and leaflets for "Winlam."

WORLD TRADE

Tinnevelly Senna Shipments.—Shipments of senna from Tuticorin during January included the following:—

	United Kingdom	United States	Europe
	bales	bales	bales
LEAVES ...	—	90	125
PODS ...	3	—	82

Japanese Trade Mission.—A Japanese medical trade mission arrived in Calcutta recently from Rangoon on a business tour of India. The leader of the mission is Mr. Fufazo Inaba (director of the Osaka Pharmaceutical Association and president of the Japanese Civil Chemical Corporation). Dr. Inaba said that his group would study the prospects of markets for Japanese medicines in India and try to promote trade in medicines and medicinal goods between India and Japan.

Indian Imports of Drug Samples.—The Indian Government announces that, in order to minimise delay and inconvenience to importers of consignments of free samples of drugs and medicines, it has decided to authorise the licensing authorities at ports to grant Customs clearance permits to cover the import of free samples of drugs and medicines covered by list I of Appendix H to the Import Control Regulations for the period January-June 1954 provided that:—

(1) No remittance of foreign exchange is involved;

(2) The c.i.f. value of the consignment is reasonably small and does not in any case exceed 5,000 rupees;

(3) The samples are imported in packings which are distinctly different from regular trade packings; and

(4) Each packing is clearly marked "Physician's samples—not for sale."

Canadian Pharmaceutical Output.—Factory shipments by the manufacturing plants in Canada engaged chiefly in making patent and proprietary medicines, pharmaceuticals and similar commodities were valued at \$88 millions in 1952, showing a decline from \$89·2 millions in 1951, according to an annual report on the medicinal and pharmaceutical preparations industry. There were 213 factories in that group in 1952, seven more than in 1951. Ontario with ninety-seven plants accounting for \$44 millions of the total value of factory sales, and Quebec with ninety-one plants for \$41·8 millions. Employees in all plants totalled 7,457 against 7,481 in 1951 and salaries and wages amounted to \$20·5 millions against \$18·9 millions. Among the industry's products, sales of patent medicines were valued at \$17·6 millions (\$16·3 millions in 1951); penicillin preparations, \$3·2 millions (\$4·4 millions); hormones, \$2·5 millions (\$1·3 millions); sulphonamide preparations, \$1·2 millions (\$893·228); biologicals and vaccines, \$3·8 millions (\$3·4 millions); toilet preparations, \$3·8 millions (\$4·2 millions).

THE MERCHANDISE MARKS ACT, 1953

By CHARLES STEVENS, LL.B., F.P.S., Barrister-at-Law

SECTION 1 of the Merchandise Marks Act, 1953, came into force on February 1, with the result that all the provisions of the Merchandise Marks Acts, 1887 to 1953, are now fully effective.

Much discussion has appeared in the pharmaceutical and general commercial Press concerning the new Act, and especially about Section 1. As the Act can affect every pharmacist in practice it may be well to consider some of its possible results. The 1953 Act can affect not only the manufacturing pharmacist and, to a lesser degree the wholesaler, but also every retail pharmacist keeping open shop, whether in selling the goods of others or in preparing, packing and selling his own nostrums and remedies.

Section 1 of the Act is designed to give the public protection against the application of false or misleading trade descriptions to goods, and it should be noted that the word "misleading" has been added by the 1953 Act. Previously it was an offence only to apply a false description. Another widening of the protection offered by the 1953 Act is that the definition of "trade description" is widened to deal with statements as to the fitness for purpose, strength, performance or behaviour of any goods, as well as with misleading or false descriptions as to the standard or quality of any goods according to a classification commonly used or recognised in the trade.

Protection for Public

Under civil law there has always been protection for the purchasing public by the old common-law actions of fraud and deceit. At criminal law a development of the offence of false pretences also served as some guard against wilful misrepresentations. A civil action, however, is in general of little use to the purchasing public in such matters, and to prosecute for false pretences is a difficult and uncertain procedure for the ordinary retail sale.

Some additional protection was given to the public under the Sale of Goods Act, 1893, but that also could only be made effective by a civil action—a complicated and expensive procedure for the ordinary chemist customer. Section 13 of that Act states that, where a contract is by description, there is an implied condition that the goods shall correspond with the description. Section 14 of the same Act makes it incumbent upon the seller, where the purchaser makes known to him the purpose for which the goods are required, and the seller has skilled knowledge, to ensure that the goods sold are suitable for the purpose required. There is no doubt that, over the past fifty or sixty years, retail pharmacists have frequently transgressed against that requirement, but no customer would consider it worth his while to bring a civil action to break the contract, recover any money paid, and get possible damages. The only ways to secure protection for the ordinary purchasing public are to create an offence and for a suitable central or local-government department to keep watch on transactions.

Let us now look, therefore, at the complete Section 1 of the Merchandise Marks Acts, 1887 to 1953, and see how the business of a pharmacist is affected by its clauses. Under the Acts it becomes an offence to apply a false or misleading trade description to goods, or to sell goods to which a false or misleading trade description is applied. "Trade description" now means any description, statement or other indication, direct or indirect, as to

- (a) the number, quantity, measure, gauge or weight of any goods;
- (b) the standard of quality of any goods according to a classification commonly used or recognised in the trade;
- (c) the fitness for purpose, strength, performance or behaviour of any goods;

(d) the place or country in which any goods were made or produced;

(e) the mode of manufacturing or producing any goods;

(f) the material of which any goods are composed;

(g) any goods the subject of an existing patent, privilege or copyright.

(a) **NUMBER, MEASURE, WEIGHT, ETC.**—Contrary to what many people believe, it is not an offence under existing weights-and-measures legislation to sell prepacked tablets short in the number the package is supposed to contain. Against the Merchandise Marks Act, however, it is clearly an offence for any prepacked product to be sold that does not contain the number of tablets or pills stated on the container or the quantity of a drug stated on the container.

(b) **RECOGNISED STANDARDS OF QUALITY.**—The provisions dealing with standards of quality according to commonly recognised trade classifications are new in the 1953 Act, and many legal reviewers in discussing it have suggested that it will forbid the sale of "type" or "style" products not of the same quality as the goods they are supposed to type or style. An example might be "Port style wine" or "Paregoric sine laudanum." "Port wine" and "Paregoric" are well known trade classifications, and their standards are easily recognised. It might, therefore, be an offence to sell other materials of a lower standard and link them with a higher standard by use of the word "type" or "style." Whether that is really so depends in the ultimate on an interpretation by the Courts, and it will be interesting to see what action, if any, is brought during the next few months against the "type" and "style" products already on the market.

(c) **FITNESS FOR PURPOSE.**—This again is a conception newly provided for in the 1953 Act. It is also the one giving rise to most surmise in pharmaceutical circles. Does it mean that everything the chemist sells must be fit and suitable for whatever claims are made either on packages or in advertising? It has been suggested in some circles that the provision will give a great deal of protection to the public, but doubt does arise when one considers recent advertisements for pharmaceutical proprietaries and some of the claims made for them. Little change has taken place as yet in pharmaceutical advertising as a result of the Merchandise Marks Act, and a prosecution calling in question the fitness of any pharmaceutical product might be difficult to pursue. There would be conflicting evidence from opposing batches of experts, and it would be almost impossible for consistent decisions to be arrived at. In the United States—where, under the Federal Food, Drug and Cosmetic Act, a strict watch is kept upon all medical claims in advertising—there have been literally hundreds of cases in which it has been almost impossible for the judge to decide between conflicting expert evidence.

(d) **COUNTRY OF ORIGIN.**—Pharmacists should note this provision carefully although, as it is under the 1887 Act, there is little excuse for not knowing that all goods of foreign origin must show the country of origin or manufacture.

(e) **MODE OF MANUFACTURE.**—With the growth of pseudo-scientific advertising in certain circles, there is no doubt that offences against this portion of the Act are committed in advertisements. Occasionally in the advertising of proprietary medicines one sees all sorts of superior manufacturing processes and secret discoveries claimed that have no basis in fact. The retail pharmacist who uses unethical show material to bolster up sales of a product of this type is just as guilty as the manufacturer.

(f) **MATERIAL OF COMPOSITION.**—The manufacturer and the retail pharmacist should both be careful that they do not make and sell goods composed of non-existent or fictitious

tious materials, or that claims are made for a constituent that does not exist. The situation is not likely in fact to occur a great deal in pharmacy, as it is an offence against the Pharmacy and Medicines Act, 1941, to fail to make a correct disclosure of the contents of human medicines (though the 1941 Act does not apply to veterinary products).

(g) GOODS COVERED BY PRIVILEGE.—It is unlikely that the manufacturing or retail pharmacist would offend against the requirements under this head, and no comment is called for.

The 1953 Act states that, where a trade mark in existence and used by a proprietor or successor in title offends against the extensions brought in by the Act, it will not be an offence to continue to use that trade mark in connection with the same goods. For example, a chemist might be selling one of his own proprietaries named "Bingo Cure for Corns." Under the 1953 Act it is probably misleading to suggest that anything will cure corns, but the seller may, by the exemption, continue to use the trade mark "Bingo" or "Bingo Cure," whichever is registered.

Many retail chemists, especially in country areas, sell seeds and fertilisers. It should be noted that these are exempted from the Merchandise Marks Act. They are considered to be sufficiently controlled by the Seeds Act, 1920, and the Fertilisers and Feedingstuffs Act, 1926. Those

two acts are well known to suppliers and sellers, having been in force for some years, and no difficulty should arise in operation.

The Board of Trade announced late in 1953 that it intended to bring the new Act to the notice of Colonial and Dominion governments, so that their legislation could be brought into line for the general protection of the public. Manufacturers and exporters should note that intention because experience has shown that Colonial and Dominion governments have frequently followed United Kingdom legislation, whether of a technical or of a commercial character. For example, the Poisons Acts of most Dominions and Colonies are very much in line with the Pharmacy and Poisons Act, 1933. India has a Merchandise Marks Act closely following the Merchandise Marks Act of 1887. It has even, indeed, stiffened considerably within recent years, in advance of action in the United Kingdom, the protection given to the public under the Indian Merchandise Marks Act.

Finally it should be pointed out that the penalties for infringement of the Merchandise Marks Acts have been considerably increased, to bring them into line with modern values of money. The maximum fines have been raised from £20 or £50 in the case of second and subsequent offences to £100 or £250.

CORRESPONDENCE

Letters when received must bear the name and address of the sender, not necessarily for publication. The Editor does not hold himself responsible for the views expressed.

STUDENT EXCHANGE

SIR,—As doubtless you know, the British Pharmaceutical Students' Association participates in a student-exchange scheme. May I emphasise the importance to our profession of a scheme of this nature, whereby students are able to visit pharmacies abroad? My committee feel that this can only lead to the betterment of our profession and a raising of standards and understanding. I would be grateful to hear from any pharmacist who is willing to employ an overseas pharmacist, whether in retail, hospital or manufacturing pharmacy. I would furnish the intending employer with full details of the student, together with a competence certificate signed by the head of the department of the school of pharmacy the student attends. May I through the medium of your journal also bring to the notice of British students that the last date of application for overseas employment is March 31?

HARTFIELD,
KING GEORGE ROAD,
HARTON, SOUTH SHIELDS

W. M. DARLING, *Liaison Secretary,*
**BRITISH PHARMACEUTICAL
STUDENTS' ASSOCIATION**

TWO STALWARTS

SIR,—Although we attended the Memorial Service to the late Mr. G. A. Mallinson in an official capacity, Miss E. L. Worraker and I would like to be associated with the many tributes to the memory of a great pioneer in the realms of pharmacy. Miss Worraker was privileged to work with "G. A. M." at the Square, and I have known him since the formation of the (then) Retail Pharmacists' Union in 1921.

LONDON, W.C.1

A. A. STEAD

SIR,—Mr. A. E. Bailey's review (*C. & D.*, February 6, p. 135) on two outstanding personalities who have passed over is both brilliant and covers extensively a wide pharmaceutical field. His article demonstrates clearly, at two levels, that the present status and remuneration of pharmacists did not come about from wishful thinking, but from hard-headed advocacy and sound administrative capabilities. I would like to add my quota, based upon personal contacts with the two stalwarts, Mr. G. Mallinson was first and last a contractors' man. He served the class he represented well and to his utmost capacity. During a debate he preferred to play the waiting game and see how the other fellow had committed himself before offering his own brand of common-sense. As one who, on occasions, had to join issue with him, I found it necessary to be strong

in the logic of rebuttal to get a point home. He certainly knew when to challenge or temporise on an issue. One of his outstanding successes was brought about by his ability to envisage what the new set-up under N.H.S. regulations might bring unless contractors "spoke with one voice." He also had behind him the experience of what happened under the old N.H.I. when discounting entered the field. He produced a master-plan for English and Welsh contractors. I followed it step by step and marvelled at his dexterity. His first move was to secure the co-operation of Boots, Ltd. As a result he had made available to him, amongst other matters, audited vital statistics of factual evidence, on a national basis, relating to all N.H.S. matters. The value of having those facts cannot be over-estimated. It followed automatically that the other corporate bodies came in, with the Co-operative Union, and so a complete alignment of all contractors (England and Wales) came about. The next step was the inauguration of the Central N.H.S. (Chemist Contractors) Committee, for England and Wales, as the negotiating body. That Committee set the seal on a triumph of organisation. Mr. G. Tocher was a genial soul and displayed strongly two of the characteristics one associates with the Scots, courtesy and an urbane disposition. Yet, when roused, he would fight to the last ditch for his principles, and woe betide any "Sassenach" whom he found trespassing on the preserves of his Committee. His knowledge of Greater London, both geographically and pharmaceutically, was profound, and he was always approachable whether by employer or employee. I would conclude by stating that Mr. Bailey's treatise ranks as a classic in pharmaceutical literature.

G. H. ARMITAGE

OUT OF PERSPECTIVE

SIR,—Once again the Minister of Health appears to be seeking to make an arbitrary cut in the remuneration of the pharmacist. Why, I cannot understand. Dame Russell-Smith has said "The drug bill must come down." Why, again I cannot see. In my newspaper I read that the ministry has money to throw away. In 1950 a hotel in Bath was purchased for £95,000 and £32,500 spent on altering and equipping it for a nurses' home, "in order to free six houses." To date, only one house has been freed—at a cost of £600 per nurse. In 1948 a hotel in Southsea was purchased for £25,000. The Treasury granted £4,000 towards alterations, fees for alterations were £2,597, equipment cost £3,972, and adaptations £30,000. After all that it was sold for £11,500.

Another hotel was purchased in Southsea for £46,500 in 1950. Alterations cost £14,596. It is 1954—the hotel has not been used and is deteriorating from dry rot. It is to be sold. It is no use the Ministry of Health blaming the Treasury. They, too, have money to burn. £304,000 has been paid to the hotel industry to build new bedrooms and bathrooms for tourists. A Nigerian stowaway to this country in 1943 has, since 1946, received £4 2s. 4d. a week in Public Assistance, and has not done a stroke of work during that period. On the other hand the pharmacist, who does a good job of work for the public of this country, on occasions leaving his bed to dispense urgent prescriptions, delivering oxygen to dying patients often in the late evening, at week-ends, and in the early morning, visiting bedridden patients to fit trusses, all for no extra pay, gets this continual cheeseparing from a Minister who knows well that he, as representing the general public, is our best customer.

PRESTON

F. SMITHSON

RESPONSIBILITY FOR DRESSINGS

SIR.—At a recent meeting of the Pharmaceutical Service Committee at Maidstone, the old problem of responsibility for N.H.S. dressings was again considered. Those dressings, of course, are "signed, sealed, and delivered" by the manufacturer, and the pharmacist is required to hand them

out likewise. The Clerk reported that the Minister of Health had considered this problem before and, "after exploring all possibilities," he had come to the conclusion that a change in the procedure was not practicable. Surely the Minister must have issued that statement with his tongue in his cheek. I cannot believe that it is beyond the wit of man to evolve a procedure whereby the manufacturer concerned is dealt with direct. It is ludicrous that the pharmacist, who is an innocent party, should be dragged in to take part in a performance which I can only describe as pure bureaucratic comic opera. All pharmacists concerned in such cases are, naturally, irritated and annoyed, and someone, sometime, has to pay for all unnecessary grindings of the bureaucratic automaton. There is reason to think that the whole testing scheme should be revised to make it reasonable and acceptable to all parties. I refuse to believe that a small committee of educated intelligent human beings could not put forward suggestions that could be discussed at branch meetings. I am surprised that pharmacists and their organisations continue to tolerate a scheme with so many snags and injustices. As a pharmacist I have to identify myself with the body of the pharmaceutical profession, but perhaps this letter may be accepted as an indication that I have managed—with difficulty—to pull at least one foot out of the bog of mental inertia.

BEXLEY

F. WARREN

A Chartered Accountant gives answers to ANY BUSINESS QUESTIONS?

I am negotiating the taking-up of a holding of shares in a small private company. Reading through the articles of association I find that no mention is made of voting rights. What is the position?

WHERE the articles are silent on any point, the rights given in table A of the Companies Acts applies. Subject to any rights or restrictions for the time being attached to any class of shares, every member present in person has one vote on a show of hands or on a poll one vote for each share held. A proxy can be appointed if requisite notice is given. The question who can demand a poll is also dealt with. The table provides that a poll may be demanded by the chairman, or by at least three members, or by holders of at least one-tenth of the total voting rights of all members having right to vote at the meeting; or by holders of shares on which there has been paid up not less than one-tenth of the total paid up on all shares conferring a right to vote. It is to be noted that no members are entitled to vote under table A unless all payable calls have been paid.

On ceasing to be employed as managing director of a company, I have the right to receive a stipulated pension per annum for a period of ten years. It has been put forward that a new agreement can be entered into whereby the company will be released from the obligation to pay the pension on payment of an agreed capital sum payable in instalments. It is understood that this would have substantial tax benefits for me. May I have your confirmation?

WHILST a pension is in itself a taxable subject-matter, distinct from the profit of an office, it has been legally held that if an individual agrees to exchange his right to a pension for a lump sum the lump sum is not taxable under schedule A. Such lump sum, even though payable in instalments, is a commutation of the pension, and is in the nature of a capital payment that is substituted for a series of recurrent and periodic sums that are in the nature of income. A sum received on the sale or surrender of pension rights is not taxable under schedule E, since it is neither pension nor annuity, and comes under no heading of that schedule.

We are the lessors of shop premises liable for rent and rates, with the landlord responsible for repairs. The front part of the premises juts out from the main building of which it is a part. We have repeatedly requested the owner to put right a serious defect in the roof of the front part which, had we not attended to it our-

selves, would also have undoubtedly caused damage eventually to stock. The cost of the repairs was £275, and we feel the landlord should be charged not only with that amount but also with loss of profits by reason of our loss of use of capital. What is your opinion?

A FORMULA can be given for loss of profit according to the number of times stock might have been turned over ("rate of stock turnover") in the period from date of payment of the repairs to date of actual re-imbursement. Supposing that period to be one year and the gross profit 25 per cent. on purchases and all overheads to be already covered, the damage might be stated thus:—

Cost of sales (purchases adjusted by opening and closing stocks) divided by average stock held = rate of stock turnover. Rate of stock turnover multiplied by £275 = total purchases "lost." 25 per cent. of that total = loss of (gross) profit. But it may be contended that a proportion of overheads should be chargeable or that such damages are too "remote" and the court would allow only a fair percentage return with the £275, having regard to the kind of business. A compromise settlement may be arrived at.

With my wife, I am the owner of a business. In December 1952 I bought the premises from the family of my predecessor. I paid a reasonable rent on a repairing lease that had about sixteen years to run, which was granted to the limited company, bearing the previous name, of which my wife and I are the sole directors. I made quarterly rent payments, but in 1953 paid myself no rent. The property is in my own name and I have a mortgage running. Would it be better for me to continue paying the rent from the company to myself or not? If I do, I have to pay the tax in my own P.A.Y.E. If not, I pay through such profits as I can draw in directors' fees. It seems about as broad as it is long, but I am also uncertain whether it might not be better to keep the lease running.

If the company pays the schedule A tax, it can recoup itself from you by deduction from rent payments. As you pay an annual rent of equal amount to your landlord, no income-tax responsibility lies with you but is passed on when you make your own rent payments. P.A.Y.E. does not enter into the matter. If the company pays no rental, it is still liable as occupier (unless you elect to be assessed) for the same schedule A without right of recoupment whilst you yourself will have paid the rent without reimbursement.

TRADE REPORT

The prices given are those obtained by importers or manufacturers for bulk quantities or original packages. Various charges have to be added whereby values are in many instances augmented before wholesale dealers receive the goods into stock. Crude drugs and essential oils vary greatly in quality and higher prices are charged for selected qualities.

LONDON, FEBRUARY 10: The firmer tone in the CRUDE DRUGS market was maintained during the week. At the moment the volume of inquiry from overseas is good, but resulting business is less satisfactory. Whether that is because London quotations are being undercut by other countries or because import permits cannot be obtained by the inquirers is not known—possibly a combination of both factors is responsible. Movement in the home market is comparatively slow for the time of year.

CARDAMOMS (Aleppy greens) continued to advance, the spot price being 16s. 6d. per lb. against 16s. 3d. in the previous week. African GINGER maintained its recent value, whilst Jamaican new-crop quotations were up by 15s. per cwt. for shipment. BUCHU was offered by re-sellers for February-April shipment at 2s. 2d. per lb., c.i.f. CINNAMON BARK is scarce at origin and prices are substantially dearer. Ceylon white PAPAIN was easier for shipment by 1s. per lb. and with lower quotations at origin for ARECA NUTS, spot material declined by 5s. a cwt. Stocks of PIMENTO are now scarce on the spot, and holders are asking 3s. 9d. per lb. against 3s. in the previous week. In AROMATIC SEEDS, CORIANDER remained firm on the spot, but shipment quotations eased slightly. Shipments of Tinnevelly SENNA from Tuticorin to the United Kingdom during January were negligible (see p. 168). The quality of the stocks at origin is described as poor whilst arrivals at Tuticorin from the growing areas are limited. Alexandrian LEAVES and SIFTINGS are firm whilst good quality PODS are unobtainable. The spot prices of CASCARA SAGRADA and SENECA have now moved up in sympathy with the higher prices that have been ruling at origin for some time. A firmer tendency in the values of BEESWAX is noticeable.

PHARMACEUTICAL CHEMICALS were unchanged at previous levels. ESSENTIAL OILS were mainly firm, the most notable feature being provided by LEMONGRASS which gained a further sixpence per lb. during the week. Some manufacturers of CINNAMON have withdrawn their prices in view of the present position of the bark.

EXCHANGE RATES ON LONDON

At the opening on Wednesday

Alexandria	Piastras to £	97½-97¾
Amsterdam	Florins to £	10.56-10.72
*Bombay	Shillings to rupee	1/5½-1/6½
Brussels	Francs to £	138.95-141.05
Copenhagen	Kronor to £	19.19½-19.48½
Dutch West Indies	Florins to £	5.24-5.32
*Hong Kong	Shillings to \$	1/2½-1/3½
*Karachi	Shillings to rupee	2/1½-2/1½
Lisbon	Escudos to £	79.90-81.10
*Montreal T.T.	Dollars to £	2.71½-2.71½
New York T.T.	Dollars to £	2.78-2.82
Oslo	Kronor to £	19.85-20.15
Paris	Francs to £	972.6-987.3
Stockholm	Kronor to £	14.37½-14.59½
*Singapore	Shillings to £	2/3½-2/4½
Zurich	Francs to £	12.15½-12.33½

*Free market rates; remainder Bank of England.

93s. 3d.; 8-oz., 92s. 3d.; 16-oz., 91s. 6d.; tins, 25-oz., 90s. 6d.

IODINE and preparations. — Quotations are as follows:

B.P. materials	Per lb.		Per kilo	
	1-cwt.	28-lb.	50 kilos	12½ kilos
POTASSIUM IODIDE	s. d.	s. d.	s. d.	s. d.
SODIUM IODIDE ..	14 4	14 10	31 7	32 8
IODINE, RESUB. ..	15 10	16 4	34 11	36 0
IODOFORM POWDER	25 4	25 10	55 10	57 0
IODOFORM CRYSTAL	28 0	28 6	61 8	62 10

The prices of minor iodides in 7-lb. and 1-lb. lots are:—AMMONIUM, 21s. 21s. 6d.; ARSENIC TRI-, 47s., 48s.; CADMIUM, 22s., 22s. 6d.; CALCIUM (PLATES), 21s. 6d., 22s.; ETHYL, 27s., 28s.; IRON, 23s., 23s. 6d.; LEAD, 22s., 22s. 6d.; LITHIUM, 28s., 28s. 6d.; STRONTIUM 22s. 3d., 22s. 9d.; ZINC, 27s., 27s. 6d.

OPIATES.—Home trade rates for 4-oz. up to 7-oz. lots including container (non-returnable) are as follows:—CODEINE.—alkaloid, hydrobromide, iodide, 58s. 6d. per oz. (2,063s. per kilo); hydrochloride, sulphate, 51s. 3d. (1,808s.); phosphate, 44s. 9d. (1,578s.). DIAMORPHINE.—Alkaloid, 60s. 3d. per oz. (2,125s. per kilo); hydrochloride, 54s. 9d. (1,931s.). ETHYL-MORPHINE.—Alkaloid, 63s. per oz. (2,222s. per kilo); hydrochloride, 53s. 9d. (1,896s.). MORPHINE.—Alkaloid, bimeconate, tartrate, 60s. 6d. per oz. (2,134s. per kilo); acetate, hydrochloride, sulphate, hydrobromide, 50s. 3d. (1,773s.).

PARALDEHYDE.—Carboy lots of pharmaceutical grade are 1s. 10½d. per lb.

QUININE.—Makers' rates (per oz.) for 100-oz. lots and over are as follows:—ALKALOID, 3s. 10d.; ACETYLSALICYLATE, 5s. 4d.; BISULPHATE and SULPHATE, B.P. 1932, 2s. 8d.; SULPHATE, B.P. 1948, 3s.; DIHYDROBROMIDE and DIHYDROCHLORIDE, 3s. 10d.; FORMATE, 4s. 8d.; GLYCERO-PHOSPHATE, 4s. 5d.; PHOSPHATE, 4s. 4d.; HYDROBROMIDE and HYDROCHLORIDE, 3s. 5d.; SALICYLATE, 3s. 11d.; QUININE and UREA HYDROCHLORIDE, B.P.C., 4s. TANNATE, 2s. 7d.

ROCHELLE SALT.—Rates (per cwt.) for powder or granulated material are as follows: In 5-cwt. lots or over, 180s. per cwt.; 1-cwt., 182s. 6d. SEIDLITZ POWDER ordinary strength is 144s. per cwt. in 1-cwt. lots; smalls, from 1s. 9½d. to 2s. 0½d. per lb. Extra-strong is 155s. per cwt., and from 1s. 10½d. to 2s. 1½d. per lb. for small quantities. Double-strength is 161s. per cwt.; smalls, 1s. 11½d. to 2s. 2½d. per lb.

SILVER SALTS.—NITRATE in 1,000-oz. lots is 4s. 0½d. per oz.; PROTEIN unchanged at 36s. 3d. to 42s. 9d. and for VITELLIN from 68s. 6d. to 76s. 6d. per lb., as to quantity.

SODIUM ACETATE.—B.P.C. powder in 28-lb. lots is 1s. 9d. per lb.

SODIUM CHLORIDE.—Re-crystallised is 20s. per cwt.

SODIUM PERBORATE.—Prices (per cwt.) are 142s. 9d. in 1-cwt kegs; 135s. 3d. in 1-cwt. bags for B.P.C. (minimum 10 per cent. available oxygen). Other strengths pro rata. The PERBORATE MONOHYDRATE testing 15 per cent. available oxygen is 305s. 3d. per cwt.

SULPHANILAMIDE.—Rates per lb. are now, 5-cwt. lots, 8s. 6d.; 1-cwt., 8s. 8d.

THEOBROMINE.—Alkaloid is about 18s. per lb. for 1-cwt. lots and the sodium salicylate, 13s.

ZINC SULPHATE.—B.P. in 1-cwt. lots is quoted at 1s. 2d. per lb.; 28-lb., 1s. 5d.,

UNITED STATES DRUG AND CHEMICAL REPORT

NEW YORK, FEBRUARY 9: Limited quantities of Japanese MENTHOL are offered at \$11 per lb., duty paid (up 50 cents). Considerable price action was noted in BOTANICAL DRUGS. Higher per lb. were Florentine ORRIS ROOT at 32 cents (up 7 cents); black PSYLLIUM SEEDS, 75 cents (5 cents); BUCHU LEAVES, 38 cents (2 cents); and CHAMOMILE FLOWERS, 60 cents (5 cents). Lower per lb. are whole IPECACUANHA ROOT at \$5.75 (down 25 cents); Sumatra BENZOIN at 28 cents (1 cent); and Tinnevelly SENNA LEAVES, with the No. 1 at 17 cents, No. 2 at 14 cents and No. 3 at 10 cents, each down 1 cent.

Higher per lb. among ESSENTIAL OILS were PETITGRAIN at \$3.00 (up 30 cents); GINGER, \$10.50 (20 cents); CARDAMOM, \$38.00 (\$5); and CUMIN, \$4.75 (60 cents). Lower were SPEARMINT, at \$5.60 (down 5 cents) and CLOVE, \$4.75 (15 cents).

Pharmaceutical Chemicals

ADRENALINE.—Minimum rates for B.P. are from 1s. 3d. per gm. and ACID TARTRATE, B.P. 1953, from 8½d.

AMYLOBARBITONE.—B.P.C. is 65s. per lb. for 1-cwt. lots and SODIUM, B.P.C., 70s. per lb.

BROMIDES.—Potassium B.P., crystals in 5-cwt. lots are 2s. 10½d. per lb.; 1-cwt., 2s. 11½d. per lb. Powder is 1½d. per lb. more. AMMONIUM is 3s. per lb. in 5-cwt. lots and 2s. 9½d. per lb.

COCAINE.—Rates per oz. are as follows: ALKALOID and SALICYLATE, bottles ½-oz., 27s. each; ¼-oz., 53s. each; 1-oz., 104s.; 4-oz., 103s.; 8-oz., 102s.; 16-oz., 101s.; tins, 25-oz., 100s.; HYDROCHLORIDE and NITRATE, bottles, ¼-oz., 24s. 6d. each; ½-oz., 48s. each; 1-oz., 94s.; 4-oz.,

Crude Drugs

ALOES.—Prime Cape is 172s. 6d. per cwt. with f.a.q. at 160s., on the spot. Shipment, no offers from origin. Curaçao is 330s. on the spot and 305s., c.i.f., for shipment.

ARECA NUTS.—Quotations are easier at 45s. per cwt. for Ceylon material on the spot. Shipment, 42s. 6d., c.i.f.

BUCHU.—Short round leaves for February–March shipment are offered sparingly by re-sellers at 2s. 2d. per lb., c.i.f.

CARDAMOMS.—Firm. Aleppy greens, 16s. 6d. spot; shipment offers are 16s. per lb., c.i.f.

CASCARA SAGRADA.—Firm. Offers for shipment are now 285s. per cwt., c.i.f. Spot supplies are 325s., duty paid.

CHILLIES.—Mombasa are 295s. per cwt. on the spot, and 275s., c.i.f. Zanzibar are 280s., c.i.f.; No spot available. Sierra Leone not offering.

CINNAMON.—Ceylon for shipment (c.i.f.), per lb.; OOOO, 3s. 8½d.; OOO, 3s. 7½d.; OO, 3s. 6d.; O, 3s. 5½d.; firsts, 2s. 11½d.; seconds, 2s. 10½d.; thirds, 2s. 10d.; quillings, 1s. 10½d.; featherings, 1s. 1d.; chips, 5½d. to 6½d.

CLOVES.—Quiet. Zanzibar on the spot are 4s. 9d. per lb.; prompt shipment, 4s. 3d., c.i.f.

COCHINEAL.—Black brilliant is 9s. 9d. per lb.; and silver-grey, 8s. 3d., nominal.

ERGOT.—Quiet. Portuguese for prompt shipment is 16s. per lb., c.i.f., with spot value around 16s.

GINGER.—Firm. African on the spot is from 100s. to 105s. per cwt., as to quality, and for shipment 97s. 6d. per cwt., c.i.f. Jamaican No. 3 is again firmer at 130s. on the spot with new-crop from origin at 135s., c.i.f.

GUM ACACIA.—Kordofan cleaned sorts on the spot are quoted at 110s. per cwt. February shipment is 99s., c.i.f., and March–April, 98s., c.i.f.

IPECACUANHA.—Nicaraguan for shipment is scarce at 48s. to 49s. per lb., c.i.f.; Colombian, 44s., c.i.f. Spot: Matto Grosso, 46s.; Colombian, 49s.; Nicaraguan, 54s. nominal.

KARAYA.—No. 1 gum on the spot is quoted at 200s. per cwt.; No. 2 is 140s.

KOLA NUTS.—African halves are available on the spot at from 4½d. to 5½d. per lb., as to quality.

LIQUORICE.—Natural whole root, spot: Anatolian, 60s. per cwt.; Russian, 40s.; Syrian, 37s. 6d. Block juice quotations are 195s. per cwt., delivered. Turkish stick is 240s. and Italian stick, 475s. per cwt., both duty paid.

LOBELIA.—Herb is scarce on the spot. Nominal value 3s. 6d. per lb.

MACE.—West Indian pale blade is 7s. 9d. per lb., for shipment, 6s. 11½d. c.i.f.

MENTHOL.—Spot. Chinese is about 31s. per lb., duty paid, and for shipment, 28s. 3d., c.i.f.

NUTMEGS.—West Indian 80's quoted at 2s. 9d. per lb. on the spot and 2s. 5½d., c.i.f., for shipment.

ORANGE PEEL.—Bitter quarters, Spanish quoted at 1s. 4d. and West Indian at 1s. 2d. per lb. on the spot. No thin cut available.

ORRIS ROOT.—Offers of Florentine good sorts are scarce at 180s. per cwt.

PAPAIN.—Spot values for East African grade one are 24s. per lb., and grade two, 21s. Ceylon white for shipment is 23s. c.i.f.

PEPPER.—White Sarawak is now quoted at 6s. 10d. per lb., with afloat parcels from 6s. 7d. to 6s. 8d., c.i.f. Black Sarawak, f.a.q., is 6s. per lb., spot; special,

afloat, 5s. 11d., c.i.f. Black Malabar 72s. per cwt. spot and 700s., c.i.f. for afloat.

PIMENTO.—Firm. Jamaican is offered at 3s. 9d. per lb. on the spot.

QUASSIA.—April–May shipment offers are 31s. per cwt., c.i.f.

QUILLAIA.—Supplies of whole bark are cleared on the spot. Cut has advanced to 185s. per cwt. on the spot.

RAUWOLFIA (SERPENTINA).—Offers for prompt shipment are 5s., c.i.f.

RHUBARB.—Chinese. Rough round, high dried (A) has been offered about 8s. 9d. per lb. Smaller sizes of same quality not available.

SEEDS.—Current rates (per cwt.) are:—

ANISE.—Cyprian, 170s., spot London.

CARAWAY.—Sellers quoting Dutch at 120s., duty paid, London. Firm.

CELERY.—Sellers of Indian at 210s., spot London.

CORIANDER.—Moroccan reported sold at 60s., duty paid (55s., in bond). English, 75s. Moroccan, for shipment, 47s., c.i.f.

CUMIN.—Cyprian, 127s. 6d.; Moroccan, 127s. 6d., duty paid; Maltese, 130s. Shipment: Cyprian, 112s. 6d.; Moroccan, 104s. 6d., both c.i.f.

DILL.—Indian continues firm at 90s. spot. **FENNEL.**—Indian in poor demand at 125s., spot London. **FENUGREEK.**—Moroccan, 49s., duty paid. Firm.

MUSTARD.—English, 55s. to 72s. 6d. according to quality.

SENEGA.—Shipment quotations are

16s. 6d. per lb., c.i.f., with spot material also offered at 16s. 6d.

SENNA.—*Tinnevelly* LEAVES, 1953 wet-crop, (per lb.) prime No. 1, 1s. 1d.; prime No. 2, 11d.; prime No. 3, 8d.; f.a.q., 7d.; ungraded, 5½d.; PODS, special green, 2s. 1d.; No. 1 hand-picked, 1s. 5d.; f.a.q., 6d. *Alexandrian* leaves and siftings quoted 1s., c.i.f.; manufacturing pods, 1s. 10d., spot, best qualities unobtainable.

SERPENTARIA.—Root is offered at 40s. per lb. on the spot.

SHELLAC.—Weak. Spot quotations are:—

F.O.T.N. pure, 230s.; **F.O.** standard

No. 1, 250s.; fine orange, 275s. to 320s.

per cwt., ex-London warehouse.

SQUILL.—Italian white on the spot is

70s. per cwt. nominal. No. 2 is about

60s., no offers of white from origin.

STRAMONIUM.—Indian LEAVES are 5½d. per lb., spot and European, 97s. 6d. per cwt.

STROPHANTHUS.—*Kombé*, 100 per cent. is about 10s. per lb., on the spot, and *Gratus*, 17s. 6d.

STYRAX.—Spot is 5s. 9d. per lb., duty paid.

TAMARINDS.—Quiet. Madras for shipment (1 per cent. stones), 67s. 6d., c.i.f.; (5 per cent.), 65s., c.i.f.

TRAGACANTH.—No. 1 ribbon on the spot is £105 per cwt.; No. 2, £85; No. 3, £65.

TURMERIC.—Firm. Rajapore is 125s. per cwt., and Madras finger, 130s. on the spot.

New crop for March–April shipment is firm at 97s. 6d., c.i.f.

UVA URSI.—Spot offers are about 85s. per cwt.

VALERIAN.—Indian is 145s. per cwt. on the spot and from 130s. to 145s., c.i.f. Belgian, 185s., spot.

VANILLIN.—Rates (per lb.) are:—

5-cwt. lots, 30s.; 1-cwt., 30s. 3d.; 56-lb.,

30s. 6d.; smaller quantities, 30s. 9d.

WAXES.—**BEES'.**—Dar-es-Salaam. Spot,

460s. per cwt., nominal; Sudanese and

Abyssinian, 455s., duty paid and 405s., c.i.f.

CANDELILLA.—Spot is unchanged at

635s. per cwt. **CARNAUBA.**—Prime yellow

on the spot is 1,030s. per cwt.; shipment

990s., c.i.f.; fatty grey is 715s. on the

spot; shipment, 690s., c.i.f.

WITCH HAZEL.—Leaves on the spot are

about 1s. 9d. per lb.

Essential and Expressed Oils

AMBER.—Rectified on the spot is quoted at from 1s. 6d. per lb.

BAY.—W. Indian is 8s. 6d. to 9s. per lb. on the spot.

BERGAMOT.—Spot value is about 80s. per lb.

CADE.—Spanish is about 3s. per lb. on the spot for 1-cwt. lots.

CAJUPUT.—Spot supplies are 15s. 6d. per lb.

CALAMUS.—Imported oils are offering from 75s. per lb.

CAMPHOR, WHITE.—Chinese is 3s. per lb., on the spot.

CARAWAY.—English-distilled is offered at 45s.; imported oils are from 21s. per lb. for spot.

CEDARWOOD.—Spot quotations for African are from 4s. 9d. per lb.

CELERI.—Quotations are from 125s. per lb.

CHENOPODIUM.—1-cwt. lots are 47s. 6d. per lb.

CITRONELLA.—Quiet. Prices (per lb.) are:—Ceylon, spot, 3s. 9d. per lb.; shipment, 3s. 10d., c.i.f.; Java, 6s. 3d., duty paid; shipment, 5s. 7d., c.i.f.; Formosa, 5s. 9d., duty paid, and 5s. 4d., c.i.f.

CLOVE.—Madagascar leaf is firm at 12s. per lb., duty paid, and 10s., c.i.f., for shipment. Redistilled stem oil from 17s. 6d., and English distilled bud oil is now offered at 55s.

CUBEB.—English-distilled is 55s. per lb. and imported, 47s. 6d.

CUMIN.—Quotations for English-distilled oil are about 75s. per lb. and imported, 60s.

DILL.—B.P. English-distilled oil is quoted at 60s. per lb. Imported oils are offered at from 30s. to 46s. per lb., as to origin.

EUCALYPTUS.—Australian 70 to 75 per cent. eucalyptol on the spot is 4s. 10½d. per lb., and 80 to 85 per cent., 5s. 3d. Spanish, 70 to 75 per cent., 4s. 6d., duty paid.

FENNEL.—Spanish sweet on the spot is quoted from 9s. 6d. per lb.

GARLIC.—English is from 55s. to 60s. per oz.

GINGER.—English-distilled oil is from 120s. per lb. Imported oils are available at from 65s. per lb.

HYDNOCARPUS.—Spot is offered at 2s. 2d. per lb.

LAVANDIN.—Spot values are from 13s. 9d. to 16s. per lb., as to quality.

LEMONGRASS.—Firm. East Indian is now 9s. 10½d. per lb. on the spot and 9s. 10½d., c.i.f., for shipment.

OLIVE.—New-crop Spanish virgin and pharmaceutical oils (B.P.) are offered on the basis of £214 5s. per 1,000 kilos, f.o.b., Spanish ports for February shipment. Equivalent landed terms ex-wharf London/Liverpool approximately 21s. per gall. for minimum 1-ton lots (5 x 48-gall. drums).

PENNYROYAL.—Spot value is from 13s. 6d. to 14s. per lb., duty paid.

PETITGRAIN.—Paraguay on the spot is 18s. per lb., and for March–May shipment is 17s., c.i.f.

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PAPER CHROMATOGRAPHY, ELECTROPHORESIS

Fine Chemicals Group Discussion and Demonstration

THE fine chemicals group of the Society of Chemical Industry engaged in a discussion and demonstration on "Paper Chromatography and Electrophoresis" in London on January 15: a successful meeting for which the credit lies with Dr. Tudor S. G. Jones (Wellcome Research Laboratories, Beckenham, Kent), who arranged the meeting. The chair was occupied by Dr. H. J. Barber (newly appointed vice-chairman of the group).

In an introductory paper at the afternoon session DR. TUDOR JONES dealt with "Trends." He said that the application of paper chromatography to numerous problems in all fields of chemistry had been so rapid and extensive that most variants appeared to have been imagined and a semblance of stabilisation had been attained.

Record of Advance

The two-phase systems originally used, and implied in the term "paper partition chromatography," had been replaced in some instances by single-phase, and, for non-polar solutes, reversed phase systems. Paper had for some purposes been chemically modified or loaded to make the cellulose a mere support. The direction of solvent flow on the paper had been modified, downward flow being supplemented by upward and horizontal imbibition and the original two-way being extended to three-way by drying between runs. Visualisation had been heightened by colour or fluorescence of the solute, by fluorescence quenching, and by applying reagents. Physical methods included scanning by all wave-lengths of radiation, radioactive counting techniques, autoradiography, etc. Biologically-active substances might be detected by removal from the paper or by "printing" on solid culture media. Inhibition or stimulation of bacterial growth had both been used. Enzymes had been used to detect suitable substrates, and had themselves been investigated as solutes.

The small scale on which paper chromatography might be applied was suited to the complexity of mixtures of products of biological origin. It was a useful method of preparing radioactive organic substances of high specific activity *via* biological synthesis. Multiple chromatograms and thicker paper enabled adequate quantities for micro-analysis to be isolated and purified.

Paper electrophoresis promised to rival paper chromatography in the rapidity of its adoption. A feature was the ease mobility could be systematically varied by adjustment of pH. An example was the separation of the nucleotides from a single nerve cell on 1 mm. of fibre length—a scale far exceeding in minuteness that of paper chromatography.

At the evening session three papers were presented. The first, "Paper Chromatography in the Fine Chemicals Industry," was read by DR. E. LESTER SMITH (Glaxo Laboratories, Ltd.). Dr. Lester Smith said that in the ten years since its introduction, paper chromatog-

raphy had become one of the most useful and versatile techniques, yet its potential value was still not fully recognised. Special equipment was not essential and results could sometimes be obtained within an hour or so. Solubility, in the usually aqueous static phase, could be modified by adjustment of pH or salt concentration, while almost any organic liquids, singly or mixed, could serve as the mobile phase. The technique was incredibly efficient; for example, isomeric acids of molecular weight about 1400 had been completely separated. The scope was extensive. It was essentially a micro technique, generally dealing with mgm. or microgm. quantities for qualitative or quantitative analysis. However, the scale could be stepped up to permit purification of several hundred mgm. of material.

The second of the three papers, on "Cellulose-column Chromatography," was read by DR. D. GROSS (Tate & Lyle, Ltd.), who said that the technique was a logical development of paper chromatography, using the same adsorbent and similar solvent systems for the separation of far larger quantities. The main application in organic chemistry had been to carbohydrates, though a number of papers had appeared describing the use of cellulose columns for separating such varied compounds as amino acids, nucleotides, phosphatases, keto acids, and germination factors.

The author and his co-workers at the Tate & Lyle research laboratory had modified and adapted the technique for large-scale separations of mixtures containing several sugars, involving amounts of up to 60 gm. Columns of up to 12.5 cm. diameter had been used. Two kinds of separations had been successfully dealt with: quantitative analytical procedure where complete separation and recovery was essential; and preparative procedure where the recovery of the highest possible yield of highest attainable purity was aimed at but where losses due to incomplete separation were permissible. Experience had shown that there was no basic difficulty in using large columns provided care was given

to a few essential points: tight and uniform packing of the dry cellulose powder when forming the column, thorough washing to free the column from trapped air and soluble material, testing with a mixture of dyes, and the choice of a suitable solvent.

The final paper, on "Paper Electrophoresis," was given by MR. D. F. MUGGLETON (May & Baker, Ltd.), who said that the controlled migration of ions in buffer-impregnated filter paper under the action of an applied electric field was valuable as a technique for separating mixtures of proteins, peptides, amino acids and many compounds of low molecular weight. Excellent results could be obtained with equipment readily constructed from materials available in most laboratories. The technique offered advantages over electrophoresis in free solution. Experiments might be successfully performed on a few microgm. of material in dilute solution, a complete separation of the mixture being obtained rather than a mere boundary separation. Paper electrophoresis was more versatile than paper chromatography in that the rate and direction of migration of a compound might often be controlled by a suitable choice of experimental conditions, e.g., pH of buffer, potential gradient, etc. It generally offered also a great saving in time. The two techniques were, however, complementary.

BRITISH STANDARD

Testing Essential Oils

BRITISH STANDARD 1953, No. 2073 ("Methods of Testing Essential Oils") describes the preparation of the oil for examination and gives methods of determination for specific gravity and apparent density (weight per ml), optical rotation, refractive index, freezing point and melting point, solubility in alcohol, acid value and ester value, ester value after acetylation, citronellal, aldehydes other than citronellal, carvone and menthone and phenols. It is hoped to issue an addendum later, including some of the methods which it has not been found possible to standardise at present. (Price 4s.)

C. & D. RETAIL AND DISPENSING PRICE LIST

The drug index for January was 195·5

Cost		Item	Poison Class	4 oz.		1 oz.		1 dr.	
d.	per			s.	d.	s.	d.	s.	d.
90	500 mil.	Acet. ipecacuanhae				2	10	0	2
126	5 gm.	Atropin. sulphas				per	gr.	0	4
67	100 gm.	Coccus				—	2	9	0
57	5 gm.	Dithranol				per gr.	0	2	9
255	100 mil.	Ext. ipecacuanhae liq.				—	—	3	0
52	25 gm.	Fluoresceinum soluble				—	2	2	4
78	gm.	Lachesis chlorid.				per	gr.	0	9
105	500 mil.	Lin. bellad. meth.				3	5	0	2
93	500 gm.	Magnes. phosphas tribasic				3	0	10	0
42	25 gm.	Ol. cajuputi				—	7	0	1
69	25 gm.	Ol. menthae pip.				—	—	1	10
60	pt.	Ol. olivae; 7s. 6d., 16 fl. oz.				2	2	0	1
54	25 gm.	Ol. pini pumilions				—	—	1	5
46	25 gm.	Ol. pini sylvestris				—	—	1	3
222	500 gm.	Ol. theobromatis				7	2	2	4
51	25 gm.	Phenobarbiton. soluble				1	4	0	5
39	500 mil.	Pigment tinctorium (meth.)				2	5	0	8
72	500 gm.	Sennæ fruct. Tinnev.				3	3	0	1
102	500 mil.	Tinct. ipecacuanhae				3	3	0	11
171	500 gm.	Ung. hyd. subchloridi				5	6	1	7

Some unusual INTRAVENOUS SOLUTIONS

BY E. JEAN ANDERSON, B.Sc., M.P.S. (Sterilisation Department, University College Hospital)

IN addition to the usual intravenous solutions met with in hospital pharmacy we prepare, in this hospital, several other less well-known solutions about which we receive numerous inquiries from other hospital pharmacists. In this article I hope to cover most of these and comment on any points of interest in their preparation.

Electrolyte Solutions

Darrow's solution was one of the first electrolyte solutions to be used. A formula for it, given by Govan and Darrow¹ when discussing the use of potassium chloride in the treatment of dehydration of diarrhoea in infants, is as follows:—

Potassium chloride	...	...	...	2 gm.
Sodium chloride	...	...	...	3 gm.
Sodium lactate M/6	...	...	...	250 mils
Water for injection	...	...	...	500 mils

The solution is sterilised by autoclaving, and for its preparation, a freshly prepared molar sodium lactate solution is used and not the concentrated 70 per cent. w/w sodium lactate available on the market. The latter solution on dilution and autoclaving forms a fine brown flocculent precipitate which, though dispersed on shaking, gives the solution a straw-coloured appearance.

Butler's No. 1 and No. 2 solutions appeared in American literature² for the treatment of diabetic coma, a litre of No. 1 being given intravenously during the first hour and 6·7 litres of No. 2 during the remaining forty-seven hours of therapy. The formula for Butler's No. 1 solution is:—

M/6 sodium lactate	...	...	...	250 mils
Physiological saline	...	...	...	750 mils

and that for Butler's No. 2 solution:—

Sodium lactate	...	...	...	2·2 gm.
≡19·6 mils M/1 sodium lactate	...	...	...
Potassium chloride	...	...	...	1·0 gm.
Sodium chloride	...	...	...	0·6 gm.
Dipotassium hydrogen phosphate	...	...	...	0·5 gm.
Dextrose 5 per cent.	...	...	...	to 1000 mils

The latter formula is used in this hospital: it differs slightly from that given in the original paper. Both solutions are sterilised by autoclaving, and again the appropriate quantity of molar sodium lactate is used. Butler's No. 2 tends to caramelize considerably, however, and the final product is of a distinct brown colour. Adding sodium metabisulphite prevents the discolouration, but at least 0·06 per cent. must be added to give a colourless solution. As the preparations are calculated to contain a specific quantity of milliequivalents of the ions present, the addition of sodium metabisulphite is often objected to, the user preferring the caramelised solution, which has no harmful effects. The use of milliequivalents by doctors for expressing the plasma constituents is a common practice when they are studying acid-base balances, 1 milliequivalent being a thousandth part of an equivalent, i.e., the amount of substance which reacts with 1 milli-atomic weight of hydrogen (1·008 mgm.).

Recently modifications of the two formulas have been tried out in this hospital.³ Butler's No. 1 is replaced by saline lactate solution and is given to replace the extracellular fluid in diabetic coma. The formula for the solution is:—

Sodium chloride	...	...	...	5·85 gm.
Sodium lactate	3·39 gm.
≡30·26 mils M/1 sodium lactate	

Water for injection	to 1000·00 mils
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Butler's No. 2 is replaced by glucose electrolyte solution, and that is given afterwards for extracellular repair when the hyperglycaemia diminishes and output of urine has returned to normal. The rate of administration must not

exceed one litre in four to six hours.

The formula for glucose electrolyte solution is:—

Sodium chloride	...	...	...	1·17 gm.
Potassium chloride	...	...	...	1·49 gm.
Magnesium chloride anhydrous	...	...	...	0·24 gm.
Dipotassium hydrogen phosphate	...	...	...	0·87 gm.
Dextrose 5 per cent.	...	...	...	to 1000·00 mils

As both formulas refer to the anhydrous salts it is necessary to use 0·512 gm. $MgCl_2 \cdot 6H_2O$ per litre. This reacts with the K_2HPO_4 in concentrated solution to give a precipitate of $Mg_3(PO_4)_2$. The chlorides must be dissolved separately and well diluted before mixing with the solution of phosphate to avoid this precipitation. Both solutions are sterilised by autoclaving, and afterwards a white precipitate of $Mg_3(PO_4)_2$ appears in the glucose electrolyte but it disappears on cooling, shaking and standing for a few hours, leaving a clear solution again, no doubt owing to reconversion to the soluble $MgHPO_4$. Glucose electrolyte also caramelises in the same way as Butler's No. 2, but the brown solution is used in preference to adding sodium metabisulphite for its prevention.

Fructose has also been used in a similar electrolyte solution instead of dextrose, the formula for the fructose electrolyte solution being:—

Sodium chloride	...	...	...	5·85 gm.
Sodium lactate	...	...	...	3·36 gm.
≡30 mils M/1 sodium lactate	...	...	...
Fructose	...	...	...	50·00 gm.
Sodium metabisulphite	...	...	...	1·00 gm.
Water for injection	...	...	...	to 1000·00 mils

Fructose is said to be more rapidly metabolised and utilised than dextrose, and it is possible to reach a much higher blood-sugar level with fructose before it is lost in the urine.⁴ Fructose also leads to more rapid storage of glycogen by the liver, even in the absence of insulin; it therefore has a greater calorific value than dextrose.⁵ A further advantage of fructose is that in diabetic hypoglycaemia it may be utilised without the administration of insulin when the glucose metabolic reaction is blocked. It is also utilised normally in patients with hepatic disease when glucose tolerance is impaired.⁶ Fructose, however, is much more expensive than dextrose, and not so readily available commercially, owing to the difficulty of obtaining it pure and not contaminated with dextrose (as it is usually obtained by the inversion of sucrose or from honey, and can only be crystallised with difficulty).

Invert sugar, formed by the hydrolysis of sucrose and consisting of equal parts of glucose and fructose, has those advantages also and is therefore superior to dextrose. It has also been found in some instances to be more rapidly utilised than fructose alone, because the metabolism of the two sugars follows different paths. Invert sugar is not at present available on the market as a powder, though a 10 per cent. solution, known as Invose, is manufactured by Dextran, Ltd.

Nutrient Solutions⁶

A solution for parenteral feeding that has been used successfully in this hospital is:—

Amino acids	...	...	...	...	50·0 gm.
Dextrose	...	...	...	...	81·0 gm.
Potassium chloride	...	...	...	...	0·5 gm.
Alcohol	...	...	...	...	25·0 mils
Ascorbic acid	...	...	...	...	25·0 mgm.
Aneurine hydrochloride	...	...	...	...	2·0 mgm.
Riboflavine	...	...	...	...	2·0 mgm.
Menaphthone bisulphite	...	...	...	...	1·0 mgm.
Insulin	...	...	...	...	8 units
Penicillin	...	...	...	...	4,000 units
Water for injection	...	...	...	...	to 1,000 mils

Amino acids are obtained from Casydrol 5 per cent., 333 mils of the solution containing 16·7 gm. of amino acids and 16·7 gm. of dextrose, so that it is only necessary to add 64·3 gm. of dextrose per litre. The solution is sterilised by autoclaving, and the insulin and penicillin are added aseptically immediately before administration; 4 litres of the solution is given daily. It has a total calorific value of 2,100 calories, and provides physiologically balanced proportions of nutritional elements to be given parenterally to the patient who is unable to eat. The value of the alcohol in this preparation is that it provides additional calories without the use of extra dextrose, which would render the solution hypertonic and cause local reactions in the veins, as well as glycosuria, thus defeating the purpose for which it is given.

Complete Parenteral Feeding

Complete parenteral feeding, including the administration of fat, is also possible, using intravenous fat emulsions. They have been used for some time in America.⁷

As emulsified fat particles exert no osmotic pressure they may be injected in high concentrations in a relatively small volume of fluid, unlike proteins and carbohydrates, which in high concentration cause withdrawal of fluid from the tissues. Pyrexia is, however, a common reaction to the injection of fat emulsions, and the use of unsuitable emulsifying agents may cause phlebitis or irritation of the tissues round the vein. Gelatin appears to be the most suitable emulsifying agent, as it is non-toxic and may be administered in large quantities. In America, pure gelatin is available, but in this country no injectable grade is on the market, and samples are often pyrogenic. A 10 per cent. oil emulsion, of globule size not more than three microns diameter, appears the most effective for injection.

Injections of the mono-sodium salt of *L*-glutamic acid have been used for the treatment of insulin coma and the

coma of hepatic disease. An article about this injection by T. D. Whittet and myself has been published in the *Pharmaceutical Journal*, to which I refer those interested in securing further information.

PAS Injection

Intravenous PAS is used when the oral administration of the drug is impossible. The injection used in this hospital consists of a 3 per cent. solution of sodium *p*-aminosalicylate in distilled water with 0·1 per cent. sodium metabisulphite present as a stabiliser to prevent the solution discolouring on storage. As PAS is decomposed by heat it is not possible to autoclave the injection, which therefore has to be sterilised by filtration. The method is undoubtedly tedious, especially as the injection is given by intravenous drip and so large volumes are often required. As the breakdown of PAS is due to decarboxylation, we tried autoclaving the solution saturated with carbon dioxide in the hope that the reaction might be reversible and any carbon dioxide lost taken up again. That appears to be the reverse of the case, however, as the decomposition that occurs when a PAS solution is autoclaved alone is about 15-20 per cent., and when autoclaved in the presence of 0·1 per cent. sodium metabisulphite and carbon dioxide increases to about 30 per cent. The only satisfactory method, therefore, appears to be filtration.

I wish to thank Mr. T. D. Whittet (chief pharmacist, University College Hospital) for advice in preparing this paper.

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From the "Trade Marks Journal," January 27

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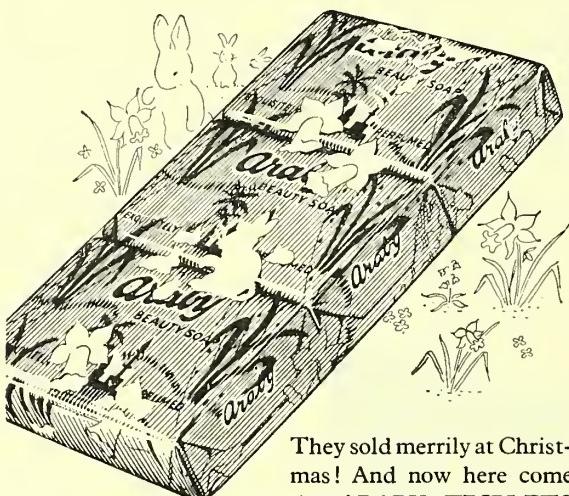


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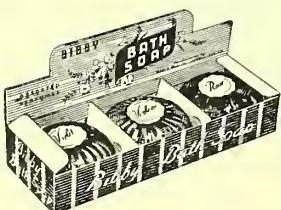
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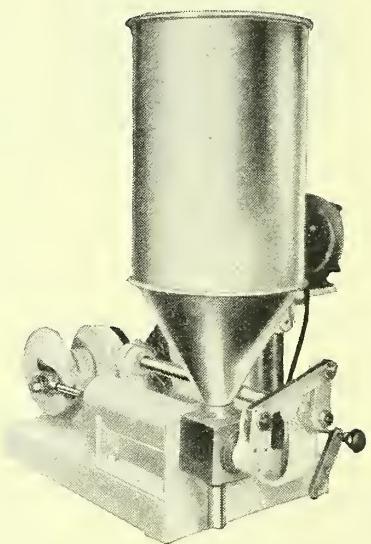
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Boxed 100's. Minimum order 10,000.

Annual contracts may be spread over a year, entitling buyers to reduced prices, and deliveries as required. Write for details.

● **APPLICATORS**, hitherto unobtainable, can now be supplied from stock, shipments having recently arrived.

Wholesale Houses only supplied.

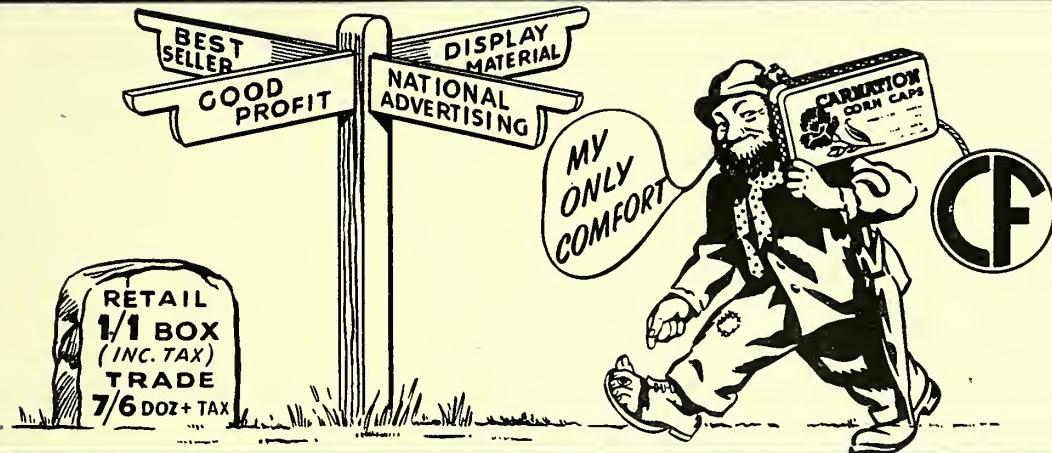
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Specialists In Veneer and Plywood Products for all Trades.
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HALEWOOD CHEMICALS LIMITED
111-115 EASTBOURNE MEWS, PADDINGTON, LONDON, W.2
AMBASSADOR 4198

CARNATION CORN CAPS



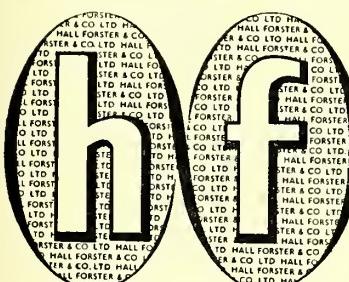
Still the most popular Corn remover

and for Callouses—CARNATION CALLOUS CAPS

A PRODUCT OF

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OLDBURY • BIRMINGHAM.



**symbol of the Hall Forster
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Seasonal 'own-name' Counter Goods:

GLYCERIN HONEY and LEMON · GEE'S LINCTUS
CODEINE LINCTUS · BLACKCURRANT COUGH SYRUP
BALSAMIC EMULSION · COMPOUND CODEINE TABLETS

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HALL FORSTER & CO. LTD.
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The BEATSON MEDICAL

A bottle of quality. The retention of the vial lip for easy pouring is combined with all the advantages of modern design, including the elimination of internal sharp corners allowing rapid dispersal of sediment.

- ★ Plain or Graduated
- ★ Cork Mouth or Screw Capped

BEATSON, CLARK & CO. LTD
GLASS BOTTLE MANUFACTURERS
ROtherham • Established 1751 • YORKS.

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Analgesic Balsam
MENTHOL & WINTERGREEN CREAM

A most effective external application for the relief of Rheumatic and Nerve Pains, Lumbago, Sciatica, Stiffness, Neuralgia, etc.

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(RESUBLIMED, PURE CRYSTAL AND TECHNICAL)

AND DERIVATIVES

WHOLESALE AND EXPORT ONLY

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VACCO

*Vacuum
Vessels*

All the models in our range are fitted with VACCO refills of extra high thermal efficiency. This ensures minimum temperature change—hot contents keep piping hot and cold contents keep icy cold.

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WIDE MOUTHED
2 PINT
VACUUM
JAR
Model J.101

2 PINT
VACUUM
FLASK
Model Q.F.

1 PINT
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Model S.C.

1 PINT
PLASTIC
VACUUM
JUG
Model P.J.

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YOU can sell more, quickly and simply, by installing Shomore Equipment. Start with a single Shomore unit and add others as your profits grow.



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DISPLAY**

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**QUALITY LABELS,
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has been our speciality for
over 125 years

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STAINLESS STEELWARE

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CLINICAL - HOUSEHOLD - INDUSTRIAL
When ordering Thermometers, insist upon Brannans — made by highly skilled workers at Britain's most modern Thermometer Factory.

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*Design & Production of
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an I.B.C. speciality*

THE INTERNATIONAL BOTTLE CO LTD

PHONE: MAYFAIR 6992 (5 LINES)

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GRAMS:
AUTREFOIS, AUDLEY LONDON

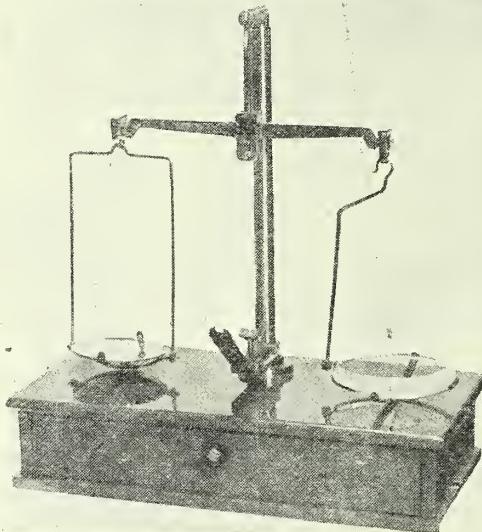
No. 88—DISPENSING BALANCE

Solid brass throughout,
and mounted on solid
mahogany box with
drawer.

Sensitivity: $\frac{1}{2}$ Grain

Length of Beam: 7"

Capacity: 2 oz.



PRICE—

Lacquered Brass

£7 10 0

Chromium Plated

£9 10 0

(Weights extra)

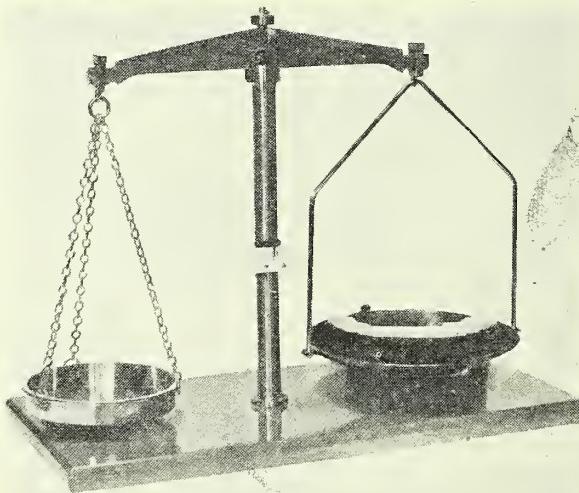
No. 77—COUNTER SCALE (Agate Beam)

Solid brass beam and
pillar, with concave
brass goods pan.
Mounted on polished
mahogany base.

Sensitivity: $1\frac{1}{2}$ Grains

Length of Beam: 11"

Capacity: 2 lb.



PRICE—

Lacquered Brass

£9 10 0

Chromium Plated

£11 15 0

(Weights extra)

Details of other sizes
available on request.

Both models, guaranteed for 12 months, are fitted with hardened steel knives,
cadmium plated to prevent rust, and comply with Weights and Measures regulations.

BRITTON MALCOLM & CO. LTD

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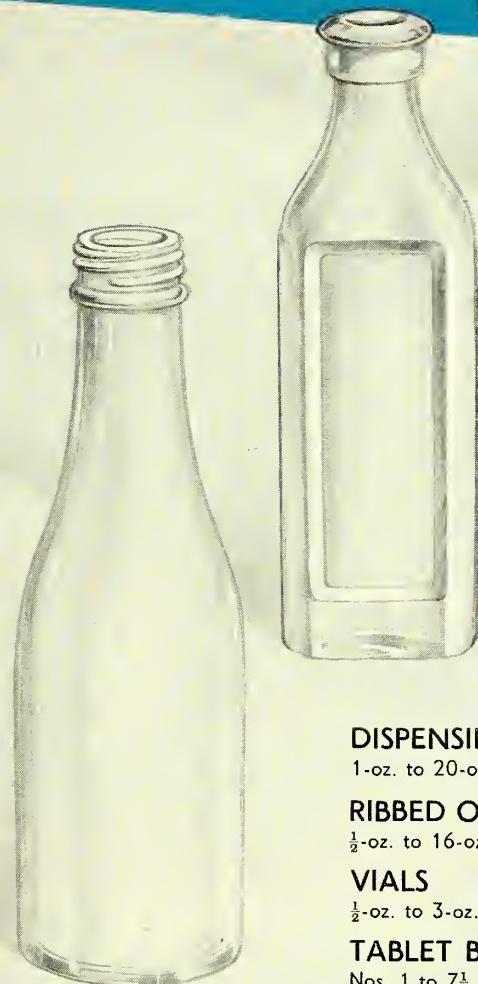
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D E P E N D A B L E



Quality

**IN WHITE FLINT
GLASS CONTAINERS**



DISPENSING BOTTLES

1-oz. to 20-oz.

RIBBED OVALS

½-oz. to 16-oz.

VIALS

½-oz. to 3-oz.

TABLET BOTTLES

Nos. 1 to 7½ sizes.



ROUND SCREW JARS

Tall and Semi-squat.

PANELLED FLATS

1-oz. to 4-oz.

BOW-FRONT PANELS

1-oz. to 8-oz.

OLIVE OIL BOTTLES

2½-oz., 5-oz. & 10-oz.

WHOLESALE ONLY

- Prompt delivery from stock
- Packed in easily handled cartons

Bow-Front Panels now also available in 16oz. size.

TRADE  MARK

**NATIONAL GLASS
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SPECIALISTS in the Manufacture of

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AND BANDAGES**

Hospital and B.P.C./N.H.I. Qualities
Plain and Sterilised



**WOVEN BLEACHED AND PACKED IN
OUR MODERN HYGIENIC FACTORIES**

AT
DUDLEY AND BLACKBURN



**SUPPLIERS TO GOVERNMENT DEPARTMENTS,
HOSPITALS, WHOLESALERS, ETC.**

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Manufacturing & Trading Company Limited
RUSSELL HALL · DUDLEY · WORCS

THERE'S ALWAYS A CUSTOMER FOR JOHN BELL'S COLD CAPSULES



Few will get through this winter without having had a Cold, Feverish Chill or Influenza. Order supplies today for the many who will certainly ask for

JOHN BELL'S COLD CAPSULES

Display the handy pack and get the maximum benefit from impulse sales.

BONUS DISPLAY TERMS

13 for every dozen on orders of 3 dozen and over :
attractive display stands supplied.
Retail price 1/10d. (Inc. Tax)
per tin.

Trade 11/6d. per dozen.
(P. Tax 2/10d.)



JOHN BELL, HILLS & LUCAS LTD.
Oxford Works, Worsley Bridge Road, London, S.E.26

G&G



VITAVEL *Syrup*

a palatable liquid preparation—

*containing the principal vitamins
in an orange base*

FORMULA One teaspoonful (3.5 cc) contains:

VITAMIN A	2,500 i.u.	VITAMIN C	10 mg.
VITAMIN B ₁	0.5 mg.	VITAMIN D	375 i.u.

PRICES

	RETAIL	CHEMISTS	WHOLESALE
6 FL. OZ.:	3/9 each	30/- doz.	26/3 doz.
40 FL. OZ.:	24/- each	16/- each	14/- each

The 6 oz. bottle provides daily vitamin-insurance for one whole month.



VITAMINS LIMITED U P P E R M A L L L O N D O N W . 6

SANCTIONED ON
N.H.S. Prescriptions (Form E.C.10)

EPHAZONE tablets

*The rational, symptomatic
remedy for
bronchial spasm in
ASTHMA & BRONCHITIS*

Containing in each tablet :

Ephedrine $\frac{1}{4}$ grain - Theobromine $\frac{1}{2}$ grain
Phenazone 1 grain, Calcium gluconate $\frac{1}{4}$ grain

This preparation is not advertised to the general public.

EPHAZONE LTD

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"KWICKDRY" HOUSEHOLD CREPE PAPER TOWELS

IN PERFORATED ROLLS
FOR THE MODERN HOUSEWIFE

THEY SAVE WORK
and DRUDGERY and
ARE STRONGER
WHEN WET.

They serve a multitude of purposes. Of a soft, pleasing, crepe texture "KWICKDRY" TOWELS are very absorbent, can be squeezed like a cloth yet do not disintegrate.

FOR DRYING HANDS
DRAINING FRIED FOOD
CLEANING POTS & PANS, etc.

"THE TOWEL THAT REALLY DRIES—AS THE NAME IMPLIES"

Wire Towel Holders supplied if required

This NEW habit is catching on! Are you cashing in?
Samples and prices from the Paper Specialists:—

FREEDER BROTHERS PAPER MILLS
BRIMSDOWN : ENFIELD : MIDDLESEX

Telephone: HOWARD 1847 (5 lines).

'Grams: Sylkocrepe, Enfield



There's lots and lots of Rheumatism about!

And plenty of demand for the most reliable general remedy of all—Curicones.

With its present up-to-date formula, it is a remedy you can recommend to all your Rheumatic customers.

This time of year a small counter show of Curicones will bring quite a nice extra trade, while obviously no chemist should ever let himself run out of stock of the 5/4, 13/4 or 25/6 size.

We still have small supplies left of our novel "weather indicator" showcard. It is most effective and surprisingly accurate. Send us

your name
and address
for one and
see the interest it attracts.

CURICONES

AND P.A.T.A.

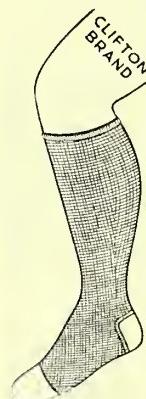
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19/21 Farringdon Street, London, E.C.4

Charles Williams

& Co.

(Prop. Alan G. Price)

Established 1887



Makers of

Clifton Brand
Elastic Hosiery

ONE WAY STRETCH
TWO WAY STRETCH

Lastex and Elastic
Net

N.H.S. Tariff Prices

also

Surgical Belts, Trusses
Suspensory Bandages, Appliances
and Chemists' Sundries

CLIFTON WORKS
Stoney Street, Beeston, Notts.
Phone: 54492

Purchase Tax and the 1954 Budget

**SPECIAL OFFER ON DIRECT ACCOUNTS FOR
BRYLCREEM, SILVIKRIN, AMAMI
AND ALL COUNTY PERFUMERY PRODUCTS**

County Perfumery Co. Ltd. are pleased to announce the following special offer to protect retailers against loss of purchase tax paid on stock in the event of a reduction of tax being announced in the Budget.

- 1 On any goods invoiced by County Perfumery Company Ltd. to a retailer between 1st March and Budget Day inclusive, 50% of any reduction in purchase tax will be refunded.**
- 2 On any goods invoiced by County Perfumery Company Ltd. to a retailer between 1st and 28th February inclusive, 25% of any reduction in purchase tax will be refunded.**

This offer applies whether or not any part of the consignment has been sold before Budget Day, and will operate automatically without any special notice or contract.

If you have not received a letter giving full details of this offer, please write to County Perfumery Company Limited, County Building, Honeypot Lane, Stanmore, Middlesex (WORDsworth 4321)



ATTENTION ALL PHARMACISTS



This is the weather for

PULMO-BAILLY

The packings available are :

STANDARD

Your Price 34/- per doz. plus 8/3½ P.T.
(90 cc. Bottle)

Retailing at 4/6 each

★

DISPENSING

16 fl. ozs. 11/6 net. 80 fl. ozs. 45/- net.

★

May we hope for your continued support in the distribution of this line.

BENGUE'S

PURE

ETHYL CHLORIDE

**FOR LOCAL AND
GENERAL ANÆSTHESIA**

Plain or perfumed with Eau de Cologne

This pioneer brand of Ethyl Chloride is of undoubted purity and anaesthetic power, and proved by over 50 years of use by the medical and dental professions.

PACKINGS

For "Local" Anæsthesia : Tubes of 30 grm.,
50 grm. and 100 grm.
For "General" Anæsthesia : Tubes of 50 grm.,
and 100 grm.

All tubes are fitted with automatic spray caps, and may be returned for *refilling only* at much reduced cost.

BENGUE & CO., LTD.

Manufacturing Chemists, MOUNT PLEASANT, ALPERTON, WEMBLEY, MIDDLESEX



...about KAY'S for coughs

He is being told! Illustrations and captions like the one above, backed by a compelling sales story, have been appearing in the National Press—telling millions of men and women all about Kay's. You can profit from this publicity. Keep well stocked with Kay's Linseed Compound and Kay's Compound Pastilles—and have Kay's display material right in the front line on your counter!

KAY'S
LINSEED COMPOUND
also KAY'S Compound Pastilles



Of course you stock Prestoband?

They'll all be asking! There's a minor injury in the family . . . or else their supply has just run out. More and more folk are saying they *must* have Prestoband handy. They like this quickest, cleanest, healthiest dressing for wounds; this safest, most comfortable strapping. It's easy on, painless off, and no mess left behind!

Keep apace with demand (and our national advertising) and stock antiseptic, water resistant, pinless, knotless, neat and tidy Prestoband.

Generous trade terms. Packed in attractive display outers. 3 widths; 2", 1" or ¾" at 1/6, 9d. or 7d. a 4-yard roll.

Made by Vernons of Preston, Sole Distributors in the U.K. are Fassett & Johnson, Ltd., 86 Clerkenwell Road, London, E.C.1; and in Eire, Fassett & Johnson (Ireland), Ltd., 6 Crow Street, Dublin.

PRESTOBAND
THE ANTISEPTIC SELF-ADHESIVE BANDAGE
*sticks to itself, but not to the skin!



products in
constant demand

Literature and further information available from the Wholesale and Export Dept., BOOTS PURE DRUG CO. LTD., NOTTINGHAM, ENGLAND. (Nottingham 45501.)

London Sales Office,
71 Fleet Street, E.C.4.
(Central 0111.)

PRODUCT	PACK	RETAIL PRICE
Alimex A palatable fluid preparation of aluminium hydroxide and magnesium hydroxide.	8 fl. oz. 80 fl. oz. (dispensing pack)	2/1½ + 4½d. P. Tax 20/-
Fenox Nasal Drops Phenylephrine and naphazoline in a non-oily viscous vehicle of adjusted pH and tonicity.	½ fl. oz. dropper bottle	2/6
Ocusol Eye Drops A unique stable combination of sulphacetamide and zinc sulphate in a buffered viscous vehicle.	½ fl. oz. dropper bottle 20 fl. oz. (dispensing pack)	3/- 67/6
Thenotrate Tablets containing theobromine, phenobarbitone and glyceryl trinitrate.	Tablets 100 500	10/6 35/-
Tusana A palatable cough linctus combining in a demulcent base the sedative effects of codeine, with the properties of cocillana and other dependable expectorants.	4 fl. oz. 20 fl. oz. (dispensing pack) 80 fl. oz. (dispensing pack)	2/8 + 5½d. P. Tax 12/6 45/-
'Viules' Single-dose injections in disposable cartridges.	Details of range and prices on application.	

Prices subject to usual trade discounts.

SI90

... new display sleeve

... extensive national

advertising



This season more than 20 million readers of Britain's largest national and provincial newspapers and popular magazines will be seeing KILKOF advertising. In its new eye-catching display sleeve, KILKOF is certain to be a bigger-than-ever "counter" attraction. And for KILKOF KONES—pleasant tasting throat pastilles—a campaign to sell from the display box on your counter. Attractive display cards and transfers are also available to help you in your selling. Stock up now to meet the assured demand!

The cough mixture that sells when displayed and repeats sales on its quality



KILKOF
and **KILKOF KONES**

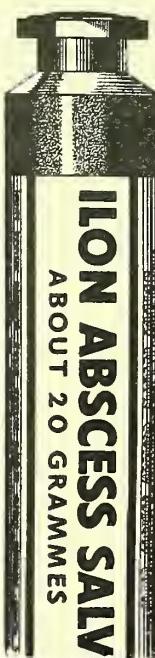
MADE BY PARKINSONS LTD. MANUFACTURING CHEMISTS, BURNLEY

ILON Products now available...

ILON ABSCESS SALVE has been found an infallible remedy for the treatment and elimination of Boils, Carbuncles and Abscesses. Rapid and painless in its action—four applications being normally sufficient.

'ILODERM'—manufactured by the same Company is excellent in the treatment of Burns, Dermatitis and most other Skin Ailments.

- There is no penicillin or other Antibiotic in any of the ILON products.



Concessionaire: T. V. DUNCAN, ESQ.,
181 BLAIRBETH ROAD, BURNSIDE,
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ILON CHEMISCHE INDUSTRIE,
FREIBURG, GERMANY

STANDARD SYNTHETICS L I M I T E D

Distillers of ESSENTIAL OILS since 1923

*Manufacturers of AROMATICS, PERFUME
BASES AND FLAVOURS.*

*We specialise in CINNAMON BARK OIL,
JUNIPER BERRY OIL, WINTERGREEN OIL,
FRENCH LAVENDER OIL, TERPENELESS LEMON OIL,
PEPPERMINT OILS, PERFUME
BASES, ETC.*

76 GLENTHAM RD., BARNES
LONDON - S.W.13

Telephone: RIVerside 3616

*Managing Director:
JOHN LESLIE HINDLE, B.Sc.*

"ROADMASTER" NIGHTDRIVING GLASSES

*The new accessory that
every Motorist wants!*

*Manufacturers: FISH OPTICAL CO. LTD.★
McNeish House 261 HARROW ROAD, LONDON, W.2
Tel.: CUNNINGHAM 8318 & 8267*

★ Makers of the world-famous 'SUNGARD' Sunglasses

WE WANT

MILLAMALT



Sole Manufacturers:

JEFFREYS, MILLER & CO. LTD., Leyland Mills,
Wigan. (London Department 19 Brookside Rd. N.) BECAUSE OF THE BUTTERSCOTCH FLAVOUR

A concise survey of the most modern
methods of medicine

DISEASES AND REMEDIES

NINTH EDITION

COMPLETELY REWRITTEN

Price 15/- (Postage 4d.)

28 ESSEX STREET · STRAND · LONDON · W.C.2



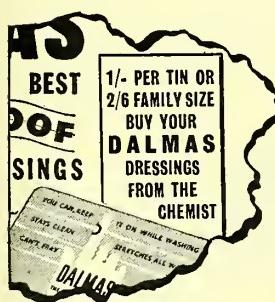
Yes! more people are asking for DALMAS

Perhaps it's the big advertising campaign. Perhaps it's on the recommendation of the 'lady next door.' But there's a definite swing in waterproof dressing sales . . . to Dalmas. Sales figures prove that it pays the chemist to sell the better value in the 'blue box.'

WHAT IS 'OMNI-STRETCH'?

Most dressings stretch in only one direction. A few stretch two ways. Dalmas Waterproof Dressings stretch in all directions. **THEY ARE FULLY FLEXIBLE.** That's why they 'stay put' so much better.

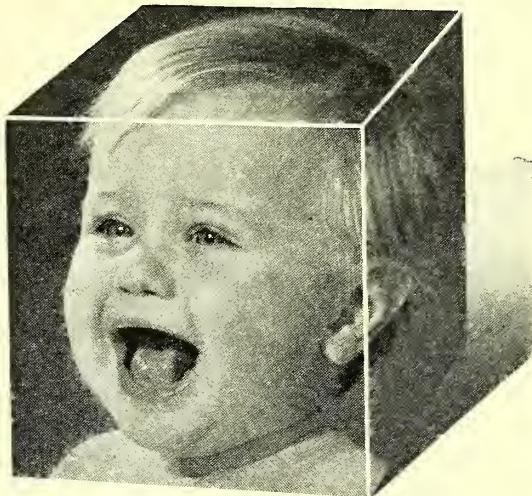
YOUR GOODWILL
Dalmas Advertising directs the customer to you. Do your part by displaying the many attractive Dalmas Sales-Aids; Counter Cards, Displays, Sell-Out boxes, etc.



DALMAS
THE ORIGINAL & BEST
WATERPROOF
FIRST-AID DRESSINGS

MADE BY DALMAS LTD., LEICESTER & LONDON. EST. 1823.

EASY WEANING



EASY SALES

MOTHERS (and babies) love Bovril's wonderful new Weaning Food. From a cube, Baby's meal can be made in one minute. Recommended by doctors and clinics, Bovril Brand Weaning Food is nourishing and digestible. It is also free from all risk of food infection, since only the amount for one meal is prepared and there are no left-overs.

Bovril's new Weaning Food is vigorously advertised. Get in good stocks of this quick-selling, successful product. Give it an effective counter display. Tell mothers about it. Every purchaser will go on buying it until her child is two years old. There are 4 varieties. Beef & Mixed Vegetables. Beef & Tomato. Beef & Carrot. Beef & Spring Cabbage.

BOVRIL BRAND Triturated Beef & Vegetable

Weaning Food



THEY MAY SOON BE DOWN WITH

Weak
with 'flu?'

Lucozade
replaces
lost energy

You lose energy fighting 'flu—all illness is weakening, and lost energy must be replaced.

1. Lucozade, the sparkling Glucose drink, replaces lost energy quickly and safely.
2. Lucozade does not upset the most delicate stomach. Invalids love its refreshing, delightful flavour.
3. Doctors and Nurses use Lucozade, in Clinics, Hospitals, Nursing Homes and Schools.

LUCOZADE
the sparkling GLUCOSE drink

LUCOZADE LTD., GREAT WEST ROAD, BRENTFORD, MIDDX.

'flu!'

Will you be able to meet the
DEMAND FOR LUCOZADE?

'Flu strikes every winter and so do all sorts of other weakening illnesses. That's why every year, about this time, the demand for Lucozade increases tremendously.

Will you be able to meet this increased demand or do your stocks only cover your present requirements?

Advertisements like this one will tell everybody in the country how good Lucozade is for common winter ailments—and how necessary it is during the convalescing period.

**ORDER MORE
LUCOZADE NOW!**

**DON'T LET YOUR CUSTOMERS DOWN
KEEP YOUR LUCOZADE STOCKS UP!**



MORE AND MORE PEOPLE ARE REALISING THAT NO SUBSTITUTE CAN EQUAL THE QUALITIES OF A NATURAL DEEP SEA SPONGE

NATURAL deep sea sponges are softer, kinder to the skin, more hygienic and hold three times more water than any substitute. More and more of your customers are realising this every day. That is why to display natural sponges is to SELL THEM!

CRESSWELL'S have been in the Sponge Trade for more than 150 years, and as the largest bulk buyers of Natural Sea Sponges Cresswells get THE BEST WHEN THE SPONGE CROP IS FISHED.

Varied assortments of popular priced RELIANCE Honeycomb and Fine Turkey Sponges are now available. Sponges are transparent wrapped if required. Please write for price lists and details — or for our Representative to call.

FREE TO STOCKISTS

This attractive special Display Basket, 3 feet high, is free on request to all Stockists of "RELIANCE" Sponges. Made of strong metal mesh and finished in high gloss Royal Blue, it makes a very attractive and robust display stand.

CRESSWELL BROS. SPONGES

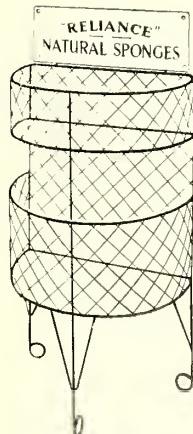
(World Natural Sponge Suppliers Ltd.)

Largest Processors and Stockists of Natural Sea Sponges in the World

International Building, Buck Street, Camden Town, London, N.W.1.

Phone: GULLiver 5462-3.

Telegrams: Sponge, Norwest, London.





Mysore Government Sandalwood Oil consignment being loaded at Bombay Port for transhipment to London Stock of the Trade Agent, per Air India International planes maintaining a 24 hour service between India and U.K.

MYSSORE

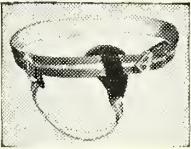
Sandalwood Oil

For further information apply to:

TRADE AGENT FOR MYSORE
9 Clifford Street, London. W.1



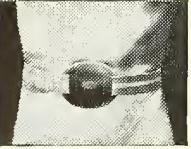
INGUINAL HERNIA



SCROTAL HERNIA



FEMORAL HERNIA



UMBILICAL (NAVEL)
HERNIA

Your Hernia Customer

can be kept comfortable
and satisfied with the

BROOKS

**ELASTIC
BAND TRUSS**

THE BROOKS service ensures a correctly made-to-measure Brooks Elastic Band Truss for the type and degree of the hernia involved, thus ensuring fit, comfort and absolute satisfaction.

The method of ordering can be on stockist lines when the chemist has fitting-room facility and there will be co-operation about the types of trusses to stock for functioning promptly and efficiently. If preferred, there can be use of the

individual chart method. An expert fitter will study it, and see to the making and supply of the suitable truss quickly.

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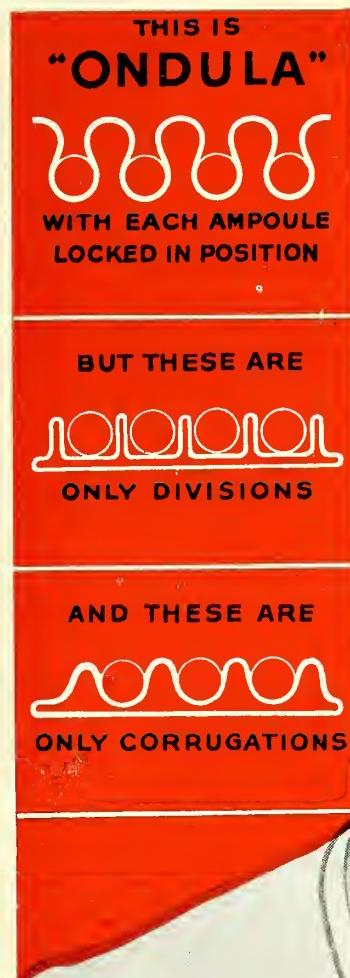
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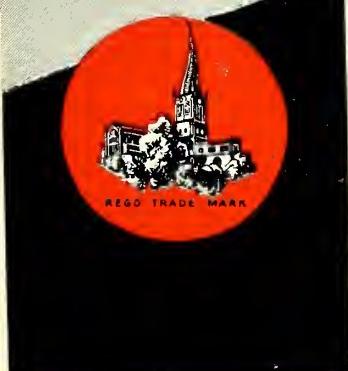
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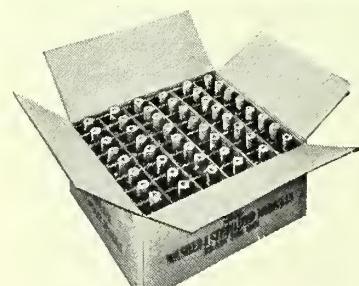


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**ARE YOU READY
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MORE SALES—MORE PROFIT

*Your wholesaler can
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MEDICINAL SNUFF

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but always order at least one dozen
and so secure the attractive and
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which, on show, will increase your
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GASTRIC MIXTURE
in the BIG PAPERS NOW”

“How they’ve GROWN!”

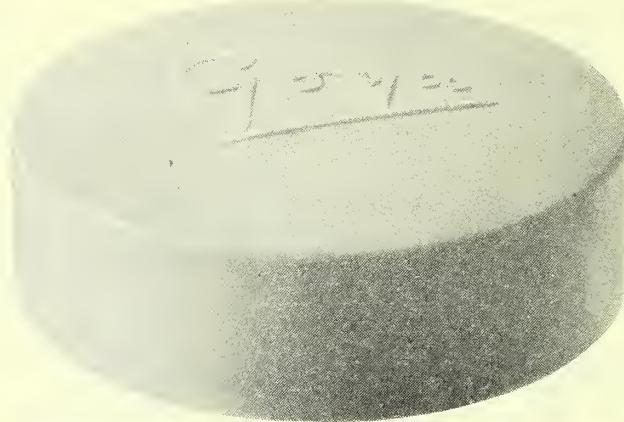


LESS THAN A YEAR AGO the first advertisement for Ventin's "Venese" appeared. Now it's big spaces in the big National Newspapers!

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BEAUTY POWDER

Goya's great new face powder will revolutionise the powder market for here is a flattering cosmetic powder that does your skin good. Blended with rich, healing emollients, Goya Beauty Powder soothes and glamorises—stays on the skin far longer than ordinary powders.



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Spearheading a hard-hitting advertising campaign for this great new product are whole pages in full colour in all the important women's magazines. Goya's advertising will tell millions of women about Beauty Powder—the first real technical advance in face powder formulation.

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CHEMIST AND DRUGGIST
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28 ESSEX STREET, STRAND, LONDON, W.C.2

ORRIDGE & COMPANY**CHEMIST BUSINESS TRANSFER AGENTS AND VALUERS WHOLESALE AND RETAIL****BRANCHES: BIRMINGHAM · SOUTHAMPTON · LIVERPOOL · SHEFFIELD · CARDIFF****Irish Representative: Mr. J. A. Bassett, Ph.C., 57 Great Victoria Street, Belfast, Northern Ireland. Tel.: Belfast 27078****BUSINESSES FOR DISPOSAL**17/6 for 36 words (min.) then 4d. per word.
Box 2/-.

AN EXCEPTIONAL opportunity occurs for a pharmacist to purchase high-class drug store at a nominal figure. Large built-up area in Kent. Genuine inquiries only. A. S. Wolmark, Ltd., 231 Walworth Road, London, S.E.17. C 4846

PHARMACY with living accommodation over at 244 Lancaster Road, W.11. Rent £200 p.a. inc. Fixtures and fittings and stock at mutual valuation. Stocks available for sale separately if required. Write, 22 Kender St., S.E.14. Phone: New Cross 5780. C 4902

APPOINTMENTS18/- per half-inch (min.) and pro rata.
Box 2/-.**ANCOATS HOSPITAL,
MANCHESTER, 4****Assistant in Dispensing**

required. Whitley Council conditions of service. Applications stating age and experience, together with the names and addresses of two referees, should be addressed to the undersigned.

JOHN H. DAFFORNE,
General Superintendent,
C 6539

**COUNTY HOSPITAL,
LINCOLN****Locum Pharmacist**

required at the County Hospital, Lincoln. Apply with full particulars to Group Pharmacist, County Hospital, Lincoln. C 180

**CRUMPSALL HOSPITAL,
MANCHESTER, 8****(Adult General, 1,225 Beds)****Pharmacist**

Applications are invited from Pharmacists for the posts of Pharmacist at this Hospital. Salary and conditions of service as laid down by the Whitley Council.

Applications, giving age, nationality, details of experience, together with the names and addresses of two referees, are to be sent to the undersigned as soon as possible.

A. T. SAMPSON, Dept. "C.D.",
Group Secretary.
C 176

**ENFIELD GROUP HOSPITAL
MANAGEMENT COMMITTEE****Pharmacist**

required. Salary £450 (at age 23) x £25 to £575, plus London Weighting and £25 for additional recognised qualifications. Whitley conditions. Applications, giving full particulars and the names and addresses of two referees, to the Secretary of the Management Committee at Chase Farm Hospital, The Ridgeway, Enfield, Middlesex, immediately. C 6515

**HACKNEY HOSPITAL
MANAGEMENT COMMITTEE,
LONDON, E.9****Pharmacist**

required for Hackney Hospital. Whitley salary and conditions. Apply Group Secretary, Hackney Hospital Management Committee, London, E.9. C 6518

DRAKELOW POWER STATION**Station Chemist**

Vacancy No. 16/54

Candidates must have experience in the analysis of coal, oil and water. Power Station experience in a responsible position is essential, preferably with high pressure and high temperature operation, the associated problems and their solution.

Experience in control of staff is desirable. Salary will be within Class J, Grade 7 (£817-£852 per annum) of the National Joint Board Agreement.

Closing date for this appointment will be March 5, 1954.

The above position will be pensionable within the provisions of the B.E.A. and Area Boards Superannuation Scheme.

Applications should be submitted on the official form which may be obtained from the Divisional Establishments Officer, British Electricity Authority, Barker Gate, Nottingham, and should be returned to the undersigned by the date stated. Please quote Vacancy number.

L. F. JEFFREY,
Divisional Controller.
C 6527

**FULHAM AND KENSINGTON
HOSPITAL MANAGEMENT
COMMITTEE,****ST. MARY ABBOTS HOSPITAL,
MARLOES ROAD,
KENSINGTON, W.8****Pharmacist**

required for new department, providing a sterile syringe service and preparing sterile solutions for the Group.

Previous experience in this type of work an advantage. Duties to commence as soon as possible.

National salary scales and conditions.

Applications, stating age and experience, quoting the names of two referees to Hospital Secretary (C.D.170) immediately. C 6535

HACKNEY HOSPITAL, E.9**Qualified Locum Pharmacist**

required immediately. Salary according to experience. Write Group Secretary, Hackney Hospital, E.9. C 6519

**MILLER GENERAL HOSPITAL,
GREENWICH, S.E.10****(180 Beds)****Assistant in Dispensing**

required at above hospital. Salary according to age and experience (max. £415 p.a. at 29 years) plus London Weighting and qualification allowance if over 18 years. Superannuable post. Apply Chief Pharmacist (Tel.: Tideway 1136). C 6497

**PRUDHOE AND MONKTON
HOSPITAL,****PRUDHOE HALL,****PRUDHOE-ON-TYNE,****NORTHUMBERLAND****Hospital Pharmacist**

salary £450 rising to £575. Professional experience will entitle successful applicant to an additional £50 on the commencing salary. Applicants must be on the Statutory Register of Pharmacists. Position is pensionable under the Health Services Superannuation Scheme. Applications, in writing, giving full particulars of age, etc., and experience to be submitted to the Medical Superintendent of the above Hospital not later than February 27. C 6533

184 STRAND, W.C.2

Tel.: TEMple Bar 9212/3 & 6340

**LINCOLN NO. 1 HOSPITAL
MANAGEMENT COMMITTEE****Senior Pharmacist or Pharmacist**

Applications are invited for the post of Senior Pharmacist or Pharmacist at the Lincoln County Hospital (Category III). This hospital is the centre for all the pharmaceutical work of the Group, which includes eleven other units and a good general experience can be gained here. The salary and conditions of service will be in accordance with the Whitley Council decisions.

Applications, stating age, qualifications and experience together with names for reference should be forwarded to the undersigned as soon as possible.

R. W. HOWICK,
Group Secretary.
C 177

**NATIONAL HEALTH SERVICE
JOINT PRICING COMMITTEE
FOR ENGLAND****Deputy Superintendent**

Applications are invited for the posts of Deputy Superintendent at the Newcastle and Birmingham Pricing Bureaux. The duties will consist of assisting in the administration of a large office dealing with the technical problems relating to the costing of National Health Service prescriptions: assisting in the preparation of statistical data, etc. The successful applicants must have initiative and the ability to control and obtain the best work from a large female staff.

The salary will be £610 x £25 (5)-£735 per annum. In both cases an extra allowance will be payable to successful applicants holding a pharmaceutical qualification.

The appointments will be subject to a medical examination and the Health Service Superannuation Regulations and the conditions of service appertaining to the Health Service.

Application, stating age, qualifications and full details of career to date, together with not more than three recent testimonials, should reach the Clerk, Joint Pricing Committee for England, 38 Northumberland Street, Newcastle-upon-Tyne, 1, not later than February 20, 1954. C 6526

**NORTH WEST DURHAM
HOSPITAL MANAGEMENT
COMMITTEE****Senior Pharmacist**

Applications are invited for the under-noted vacancy:

SUPERIOR PHARMACIST (Resident or Non-resident) at the SHOTLEY BRIDGE GENERAL HOSPITAL (557 beds).

Appointment offers a thorough experience in all branches of hospital pharmacy. Applicant would be responsible for the manufacture of sterile preparations. Salary and conditions of service according to the Pharmaceutical Whitley Council decisions.

Applications, stating age, qualifications and experience, together with names of two referees should be sent to the Secretary, Shotley Bridge General Hospital, Shotley Bridge, Consett, Co. Durham. C 6522

**ST. BARTHOLOMEW'S HOSPITAL,
LONDON, E.C.1****Pharmacists**

Vacancies exist at St. Bartholomew's Hospital, London, E.C.1. Salary in accordance with the Whitley Council Scale. Write enclosing two copies of testimonials to the Pharmacist, C 6534

Appointments—Continued

**SHREWSBURY GROUP 15
HOSPITAL MANAGEMENT
COMMITTEE**
ROYAL SALOP INFIRMARY
Pharmacist

Applications are invited for the post of PHARMACIST in the Group Pharmacy at the Royal Salop Infirmary, with rota duties at other hospitals in the Group, as may be required. Salary will be in accordance with the Pharmaceutical Whitley Council Scale. Applications should be sent to the undersigned from whom any further particulars may be obtained.

J. P. MALLETT,
Group Secretary
C 6501

**ST. MARK'S HOSPITAL,
CITY ROAD, LONDON, E.C.1**
(Post-graduate Teaching Hospital)
Pharmacist

Applications invited for the appointment of PHARMACIST at the above hospital, where there is a busy Pharmaceutical Department and a wide variety of experience is offered. Salary scale £450-£575 p.a., plus London Weighting. Age, qualifications, experience, names of two referees to Secretary. C 6491

**THE HOSPITAL FOR SICK
CHILDREN,
GREAT ORMOND STREET,
LONDON, W.C.1**
Pharmacist

Applications are invited for the post of pharmacist at this hospital. Salary within the Pharmaceutical Whitley Council Scale (£450 x £25-£575) plus London Weighting, £25 for recognised higher qualification. Apply by letter to Chief Pharmacist. C 166

**THE LONDON HOSPITAL,
WHITECHAPEL, E.1**
Pharmacist

Vacancy for above. Applicants must be registered Pharmacists. Salary scale £450 (age 23) x £25 to £575 according to previous experience and service. Dining room facilities available. Write Secretary. C 179

**THE MILLER GENERAL
HOSPITAL (180 Beds)
GREENWICH, S.E.10**
Pharmacist

Applications are invited for the post of Pharmacist, permanent or locum tenens, in a well-equipped pharmaceutical department at the above hospital. Inspection of the department may be made by arrangement with Chief Pharmacist. Applications giving full details should be made to the Secretary G. & D. D./H.M.S., St. Alfege's Hospital, S.E.10, as soon as possible. C 6486

**WHITTINGTON HOSPITAL,
ST. MARY'S WING,
HIGHGATE HILL, N.19**

Pharmaceutical Student, post-graduate, required for busy department in this large general hospital. Whitley Council terms and conditions of service. Detailed applications, together with names of two referees to the Group Secretary, Archway Group H. M. C., 46 Cholmeley Park, N.6, within 10 days. C 6530

IMPORTANT

Box Office numbers are intended exclusively for specific answers to particular advertisements. Price Lists, Trade Circulars, Samples and Printed Matter cannot be forwarded.

SITUATIONS OPEN

8/6 for 36 words (min.) then 3d. per word.
Box 2/-

The engagement of persons answering these advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-59 inclusive unless he or she, or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

RETAIL (HOME)

AYLESBURY. Young, active, up-to-date pharmacist, seeking sound experience with a view to management and final ownership, wanted in my modernly equipped pharmacy. Sound initial training and apprenticeship. This is not a position for anyone seeking a manager's salary on engagement but to the right man, who can eventually conduct this well-established business as its owner. Write giving reference addresses, and full details of training, etc., to Mr. W. Rouse, M.P.S., 34 High Street, Aylesbury, Bucks. C 4918

BURGH HEATH. Wanted immediately, qualified assistant for busy family business in pleasant country district on North Downs. Flat available shortly. Suit recently qualified man. Please state salary required, age, experience and references to Townsend, Burgh Heath, Tadworth, Surrey. C 4872

COUNTER ASSISTANT, senior, experienced for general counter and dispensary duties. An unusual opportunity with excellent conditions in ultra-modern pharmacy. Juniors also required. Apply with full particulars to Kendale Dispensing Chemists, 51 Exmouth St., E.C.1. Phone: Terminus 9494. C 6538

MAIDSTONE. Pharmacist required. Duties mainly in dispensary. Permanent and congenital post with adequate staff. Good wages and superannuation scheme. House will be purchased if necessary. Stonham & Son, Ltd., 70 Bank Street, Maidstone. C 4908

MAIDSTONE. Qualified manager required, either sex, one year commencing May. Apply with full particulars to Box C 4911.

QUALIFIED MANAGER required, either sex, for family business in Maidstone. Modern shop with up-to-date flat. No Sunday or rota duties. Permanency. Apply with full particulars to Box C 4912.

S.E. LONDON; Manager required for easily run pharmacy on main road. Good, family type, dispensing and counter business. Permanency with progressive salary. Telephone: New Cross 0262, or write to Box C 4901.

THERE ARE SEVERAL vacancies for experienced pharmacists as branch managers to open new branches. Preference will be given to pharmacists who are desirous of further progress and promotion. Accommodation is available and salaries will be commensurate with modern trends along with generous pension and sickness benefit schemes. Application giving full details stating when available for interview to Chief Pharmacist, Grange Road, Leyton, London, E.10. Telephone: Leytonstone 5671. C 4913

UNQUALIFIED young lady required, mainly for dispensing, one with apprenticeship preferred. Hours 9-6.30 p.m. Two half-days, Thursday and Saturday. Apply with usual particulars and salary required to R. F. Eakins, M.P.S., 151 Grove Green Road, Leytonstone, E.11. Tel.: Ley. 4609. C 4903

LOCUMS WANTED

LOCUM PHARMACISTS required for London and suburban areas, long or short periods February to October. Permanency at conclusion of tour if desired. Salary and expenses basis. Apply to H. Warburton, M.P.S., Chief Pharmacist, Grange Rd., Leyton, E.10. C 4914

WHOLESALE

FOR LANCASHIRE (and perhaps Westmorland, etc.). Representative with thorough knowledge of wholesale drug trade, and good connection amongst retail pharmacists on this territory. Must be experienced salesman. Excellent remuneration. Car provided. Write for interview, giving particulars. Apply Box C 6479.

ANALYTICAL AND RESEARCH CHEMIST

required by prominent Pharmaceutical Manufacturers in W. London area. Position offers unlimited scope to keen man with initiative. Applications in confidence, stating qualifications, experience, salary required, etc., to Box C 6528.

C. E. FULFORD, LTD., Leeds, offer first-class opportunity for 'above average' sales representative to cover retail and wholesale chemists' trade in N. London, Herts and Essex. Car provided, expenses paid, pension fund, bonus scheme, good holidays. Applications invited from residents of the above area. Please state territory now covered, products carried and approximate salary expected. Replies to Sales Manager. C 6521

CUSSONS SONS & CO., LTD., require window dressers for the Midlands and London areas. Apply, giving full details to: Sales Promotion Manager, Cussons Sons & Co., Ltd., Kersal Vale, Manchester, 7. C 6523

DELAVELLE (SALES), LTD., 38-46 Orsman Road, London, N.1, require an energetic representative, well known to wholesale and retail chemists, etc., throughout Gloucestershire, Herefordshire, Somerset, Wiltshire, Devon, Cornwall and Dorset, to market Blue Orchid Perfumes and Toiletries, "Go" Stick Deodorant and Creamoil Hair Cream. Sound connection exists. Exceptional opportunity by way of salary, commission and expenses for right man who must be a car owner. Write fully stating present salary to above address. C 6542

DISPENSER

(preferably male) unqualified required to assist in the manufacturing dispensary of a well-known London manufacturing Chemists. Experienced in compounding from given formulae, under supervision. Very good prospects. 5-day week. Write stating age, experience, when free and all details to Secretary, Box C 6516.

G. D. SEARLE & CO., LTD., 17 Manchester Street, London, W.1, pharmaceutical manufacturers of international standing, require representatives possessing enthusiasm for service in Great Britain. C 6537

GLAXO LABORATORIES, LTD., Medical Representatives. Some further appointments will shortly be made to our Representative Staff at Home and Overseas. Applications are invited from Pharmacists, aged preferably between 25 and 35, who are interested in representing either at home or overseas a pharmaceutical firm of international reputation, and who possess the essential qualities of industry, intelligence and dependability. Previous experience of representation is not necessary as training is given, but a good technical background in pharmacy and knowledge of sound business methods are important. If application is made for an overseas post familiarity with any foreign language should be stated. The positions offer opportunity for progress and the development of initiative; salaries are designed to recognise merit, and a Pension Scheme is in force. Candidates should send full information of education and business experience together with the usual personal details, including height, and if possible a recent photograph, to the Senior Personnel Officer, Glaxo Laboratories, Ltd., Greenford, Middlesex. C 6529

IMMEDIATE OPPORTUNITY for experienced sales representative in Greater London area aged 25-35 to join established company marketing specialised oils to pharmaceutical, cosmetic and food industries. Good salary with pension scheme. Write full particulars to Box C 4910.

MANUFACTURING CHEMISTS and distributors of the highest standing require the services of two representatives in the Midlands and South Yorkshire areas. Applicants should have a good background of retail pharmacy and live centrally on the vacant territories, i.e., one in or near Birmingham and the other in Nottingham, Leicester or South Yorkshire. Previous representative experience not necessary as adequate training will be given. Company car provided. Remuneration by salary and expenses. Give full particulars of experience to date and age. Box C 6536.

SALES MANAGER

A progressive Scottish Company, with internationally known and established products, chiefly ethicals, is about to expand its activities, and requires a first-class Sales Manager.

A pharmaceutical qualification is desirable but not essential provided applicants have a good pharmaceutical background, together with sound experience in sales-promotion. Duties will be carried out from London.

Applications, which will be treated as confidential, should give age, details of career and previous experience, salary required, and should be addressed to the Managing Director. Apply Box C 6499.

Situations Open—Continued

IMPERIAL CHEMICAL INDUSTRIES has a vacancy for a chemist for medical representative work. The territory includes part of South London and parts of some home counties South and West of London. Applicants should be aged 35 or under, salary according to age and experience. Applications with full particulars should be addressed to Imperial Chemical (Pharmaceuticals), Ltd., Office Service Department, Fulshaw Hall, Wilmslow, Manchester, C 6488.

LABORATORY ASSISTANT, Inter. B.Sc. or equivalent, required for Midland chemical manufacturer's works control laboratory, to be responsible for preparation of all standard analytical solutions and able to carry on miscellaneous chemical analysis. First-class working conditions. Pension scheme. Apply in writing, stating age, training, experience and salary required to Box C 4899.

MANUFACTURING CHEMISTS in East Yorkshire require man with drug house experience including wet and dry counter, in a managerial position for general supervision in the putting-up and despatch department of wholesale pharmaceutical concern. Permanent position with pension scheme for suitable man or woman. Full particulars including age, wage required, and copy references to Box C 6543.

MANUFACTURING CHEMISTS in East Yorkshire require chemist for research laboratory. Pharmaceutical qualification. Experience in manufacturing an advantage. Progressive and permanent position for suitable applicant. Pension scheme available. Full particulars including age, copy references, salary suggested, in confidence, to Box C 6484.

MEDICAL REPRESENTATIVE required by London house to visit doctors, hospitals and chemists in Yorkshire, Northumberland and Durham. Applicants must have a good pharmaceutical background and a knowledge of medical terminology. Men between the ages of 25 and 35 are invited to apply, and details of age, experience and salary required should be stated. Box C 181.

MEDICAL REPRESENTATIVE required to carry an ethical speciality on an agency basis. For details apply Box C 4915.

MEDICAL REPRESENTATIVES: Applications are invited by Sandoz Products, Ltd., from young men wishing to become medical representatives in the territories of Bristol, London, N.E., London, N.W., and S. Wales. Age not exceeding 28. Applicants should be qualified pharmacists (Ph.C., preferably) or possess degree in science. Salary commensurate with experience. Thorough training provided. Please send full details of age, education, qualifications and experience, with photograph, to the Manager, Sandoz Products, Ltd., 134 Wigmore Street, London, W.I. C 6506.

MIDLANDS REPRESENTATIVE required by old-established manufacturing chemists to take over live connection. Must be first-class salesman, preferably with some pharmaceutical experience. Resident on territory and able to provide own car. Payment by salary, commission, and expenses. Contributory pension scheme. Apply stating full details in first letter to Box C 6446.

OLD-ESTABLISHED City chemical merchants have opening for assistant manager in fine chemical department. Excellent opportunity for man with drive, initiative and experience. Pension scheme. Write giving full particulars, which will be treated in strictest confidence, to Box C 4924.

OLD-ESTABLISHED manufacturing chemists specialising in essential oils, essences, etc., require chemist for their research and manufacturing laboratories in East Yorkshire. Pharmaceutical qualifications essential and experience in pharmaceutical manufacture and analytical control desirable. Permanent position with commencing salary £850 to £1,000. Pension scheme available. Full particulars including age and copy references to Box C 6483.

PACKER WANTED, either sex, used to chemists' sundries and ethicals, East London, progressive position for quick and willing worker. Box C 4921.

PHARMACIST with a view to works management required for small wholesale and manufacturing laboratory. Manufacturing experience essential; wholesale experience an advantage. Good organizer. Apply with full particulars of experience and salary required to the Managing Director, Biorex Laboratories, Ltd., 47-51 Exmouth St., E.C.1. Phone: Terminus 5216. C 6524

PHARMACIST required for publicity department to control U.K. and overseas advertising in conjunction with outside agency. Able plan and help create ethical literature and keep records of existing and future programmes. Should be knowledgeable regarding distribution and sales of ethicals. Good salary and prospects offered to right man. Contributory pension scheme. Organon Laboratories, Ltd., Brettenham House, Lancaster Place, W.C.2. Attention E.B. C 6532

PROGRESSIVE COMPANY about to expand activities requires keen and experienced creative salesmen with proved selling records. Various territories available including Yorkshire, Lancashire and London. Applicants must be car owners with strongly established connections amongst retail and wholesale chemists, co-operative societies and stores. The products, including medicated confectionery and well-known proprietaries, are outstanding in presentation and selling appeal and provide exceptional scope for initiative and ability. Existing accounts handed over. Sole agencies will be considered. Please state age, territory and fullest details of personal and selling history in strict confidence. Box C 4909.

REPRESENTATIVE, old-established sundries house, North and East London, to develop and expand existing connection. Own car essential. Excellent opportunity to live man. Box C 4920.

REPRESENTATIVE with own connection retail chemists, co-ops, for well-established Midlands wholesale house, chemists' sundries, dressings, bottles, etc., Notts, Leicestershire, Derbyshire, Staffs, etc. Salary, commission, expenses. Car owner. Must be well known to chemists and resident in territory. Progressive position for right man. Give details, confidential, average turnover weekly, etc. Apply Box C 6525.

SALES MANAGER for animal feed department. Antibiotic manufacturers of international repute have an exceptional vacancy for man of outstanding ability, drive and initiative to supervise and develop their animal feed department in London marketing important antibiotic feed supplement. Applicants should have wide experience of sales management in the animal feed industry and close contacts with the larger feed compounders and distributors. Congenial, well paid post offering ample scope for personal progress. Fullest details in confidence to Lederle Laboratories Division, Cyanamid Products, Ltd., Bush House, Aldwych, W.C.2. C 6541

TRADE ANNOUNCEMENT

H. W. CARTER & COMPANY, LTD.

Makers of RIBENA and QUOSH announce that Mr. Cyril Cook, who has been their Agent in Yorkshire for a number of years, has retired and that they now have a full-time Sales Staff consisting of Mr. C. Poole as Supervisor, Messrs. J. Day and A. Rippon as general Representatives, and Mr. C. Taylor as catering Representative. All orders and enquiries either direct to the Royal Forest Factory, Coleford, Glos., or to Mr. C. Poole at: 6 Broomfield, Adel, Leeds, 6. C 6544

'UNISEC' from the Single Unit to the Complete Pharmacy
WRITE FOR YOUR COPY OF THE STANDARD REFERENCE OF PHARMACY FITTING
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Categories of Stores Due Date for return of Tenders

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Antiseptic Fluids	...	March 16, 1954
Dextrose	...	March 16, 1954
Glycerin	...	March 16, 1954
Malt Extract	...	March 16, 1954
Medicinal Tablets	...	March 16, 1954
Medicines and Drugs	...	March 16, 1954
Methylated Spirit	...	March 16, 1954
Paraffin B.P.	...	March 16, 1954
Vitamin Preparations	...	March 16, 1954

Applications for tender forms should be made in writing to the Ministry of Health, Savile Row, London, W.1, quoting reference C.S.3/RCI/IC and stating clearly the category or categories of stores for which forms are required.

No undertaking can be given that the lowest (or any) tenders will be accepted. C 6517

STOKE-ON-TRENT HOSPITAL MANAGEMENT COMMITTEE
Contracts for Drugs, Tablets, Capsules, Injection Solutions, Glucose, etc.

Tenders invited for the supply of Drugs, etc., to the Hospitals within this Group for the period April 1, 1954, to March 31, 1955. Tender forms obtainable on application to Supplies Officer, Stoke-on-Trent, H.M.C., Princes Road, Stoke-on-Trent, to be returned not later than February 27, 1954.

THORNBURROW GIBSON,
Group Secretary. C 6531

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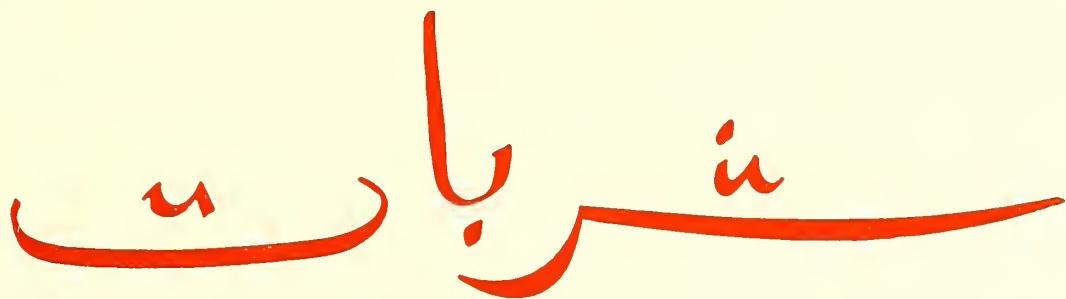
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